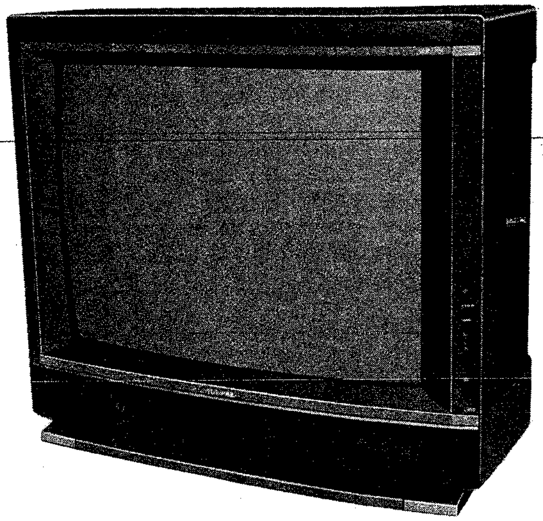
SERVICE DATA
FILE NO. 050-260
9-SYSTEM

TOSHIBA
COLOUR TELEVISION
349P9F



For service information not described in this manual, see the original service data for 309P8F (File No. 050-206)

SPECIFICATIONS

Input Power Rating : 126 watts (nominal), AC175~270 volts, 50Hz
Aerial Input Impedance : 75 ohm unbalanced type VHF and UHF
Receiving Channels :
PAL B/G, SECAM B/G system
VHF channels .... channels 2 to 12
UHF channels .... channels 21 to 69
PAL D/K, SECAM D/K, K1 system
VHF channels .... channels 1 to 12
UHF channels .... channels 21 to 69
PAL I system
UHF channels .... channels 21 to 69
SECAM L system
VHF channels .... channels A, B, C, C1, 1 to 6
UHF channels .... channels 21 to 69
CATV BAND
PAL B/G, SECAM B/G .... channels S3 to S20
NTSC-M .... channels B to Q (70 to 86)
Intermediate Frequencies : Picture I-F carrier frequency .... 32.7 MHz, 37.4 MHz Sub 38.9 MHz
39.2/31.9 MHz Sub 33.4 MHz
Sound I-F carrier frequency .... 38.7/31.4 MHz Sub 32.9 MHz
38.7/30.9 MHz Sub 32.4 MHz
Picture Tube : 34 inches, A80JYQ96X (80cm measured on diagonal of viewable picture area), 110° Deflection
Sound Output : Main: 7.0 watts × 2, Woofer 10 watts
Speakers : Main: 70mm 2pcs, 30mm 2pcs, Woofer: 100mm 1pc
Dimensions :
Height .... 769 mm
Width .... 860 mm
Depth .... 595 mm
Weight : 66.7 kg
Features : Clearness tube, VIDEO and AUDIO input/output terminals, S-VIDEO input terminals Surround audio system, Off timer, Remote Control, PIP, Selectable Picture

Specifications are subject to change without notice.

Printed in Japan Nov. 1989 (So)

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" , "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" DESCRIBED BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 30.4kV at zero beam current (minimum brightness) under 175 ~ 270V AC power source. The high voltage must not, under any circumstances, exceed 32kV.
   Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

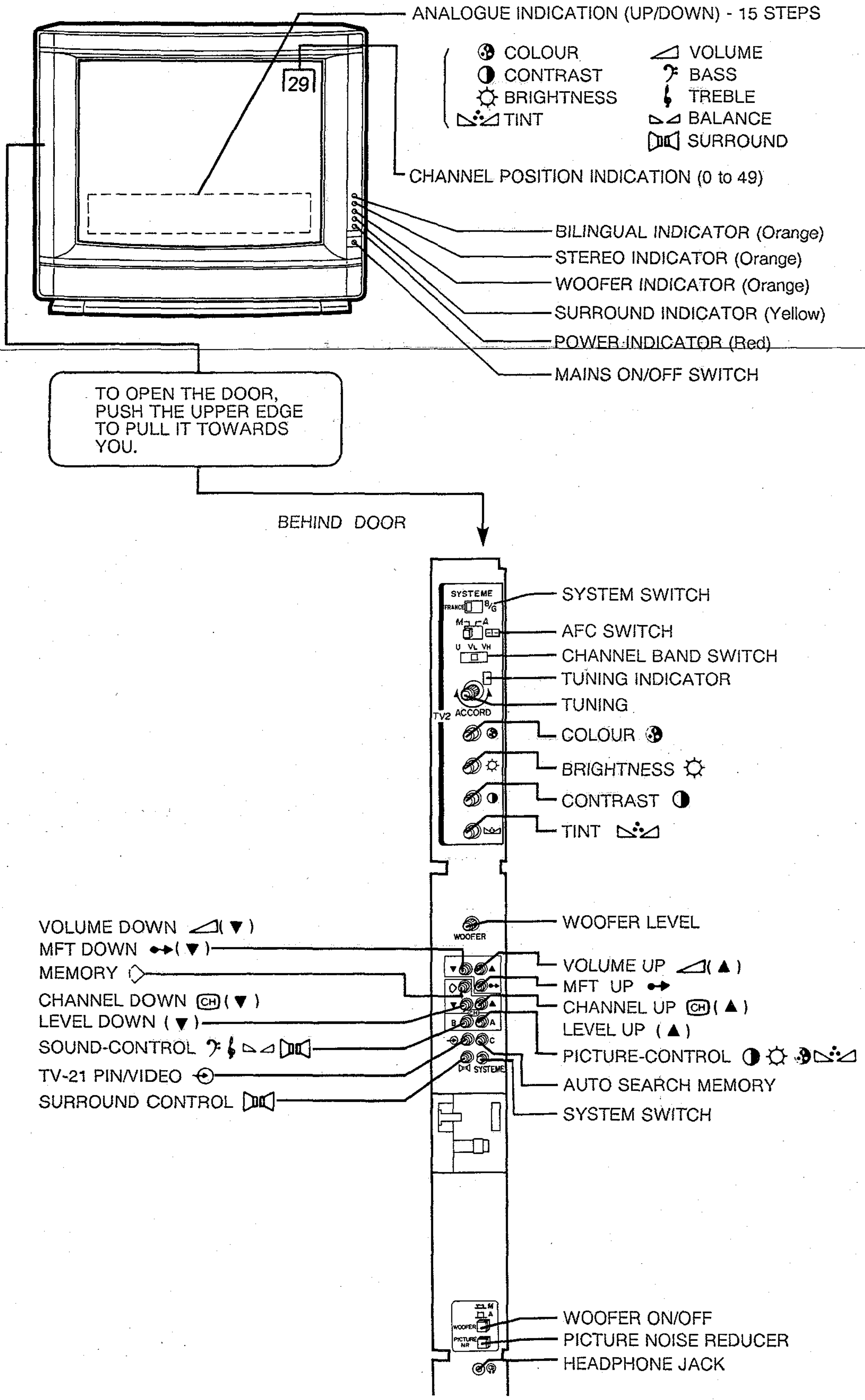
1. Potentials as high as 27kV are present when this receiver is operating. Operation of the receiver outside the cabinet or with back board removed involves a shock hazard from the receiver.
   1. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high-voltage equipment.
   2. Alway discharge the picture tube anode to the receiver chassis to keep off the shock hazard before removing the anode cap.
   3. Perfectly discharge the high potential of the picture tube before handling the tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled.
2. If any Fuse in this TV receiver is blown, replace it with the Fuse specified in the chassis parts list.
3. When replacing parts or circuit boards, wind the lead wires around terminals before soldering.
4. When replacing a high wattage resistor (oxide metal film resistor) in circuit board, keep the resistor 10mm away from circuit board.
5. Keep wires away from high voltage or high temperature components.
6. This receiver can be operated under AC 175 ~ 270 volts, 50/60Hz. NEVER connect to DC supply or any other power.

PRODUCT SAFETY NOTICE

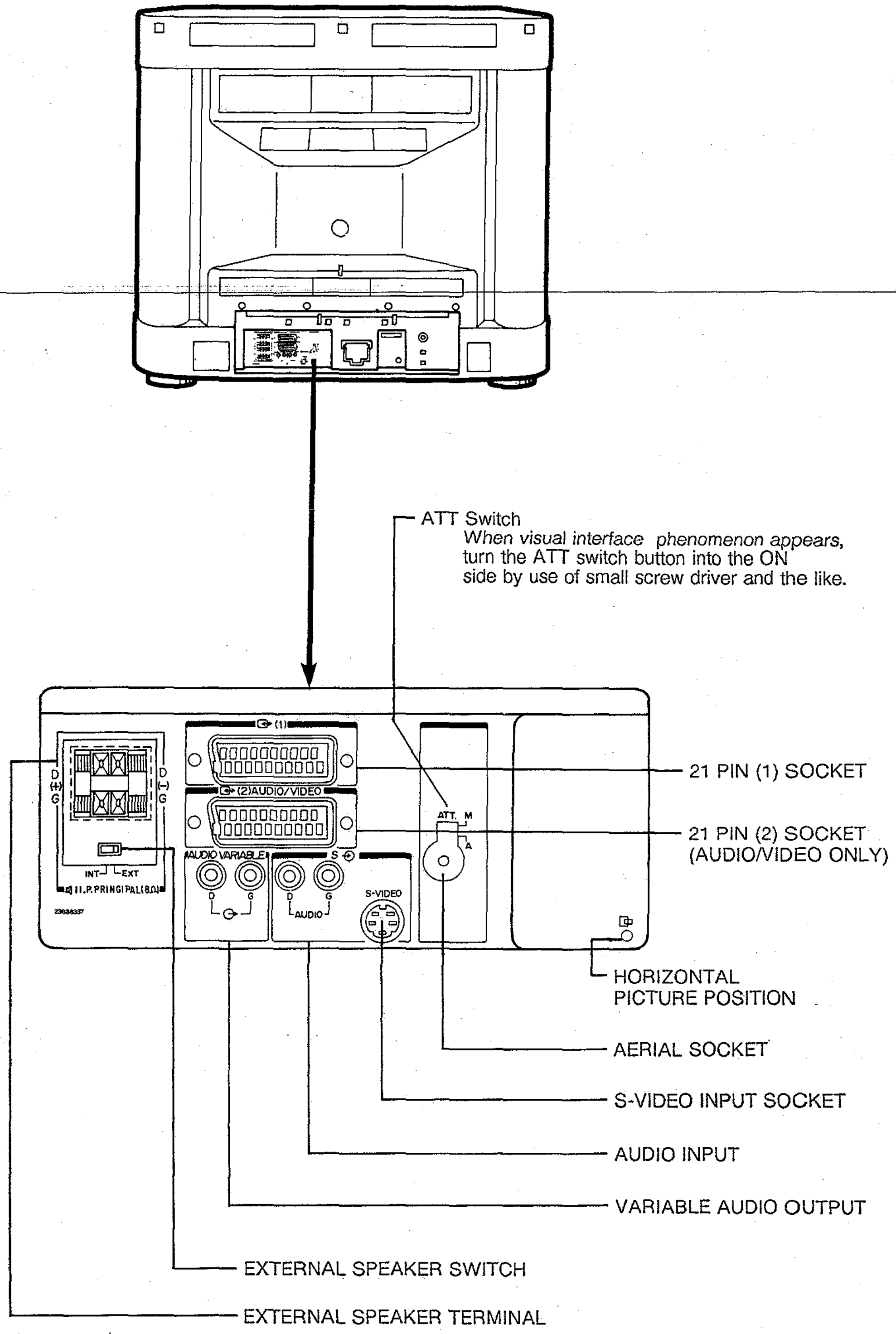
Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-RAY RADIATION protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements, electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create X-RAY RADIATION.

LOCATION OF CONTROLS

■ FRONT


ANALOGUE INDICATION (UP/DOWN) - 15 STEPS
COLOUR
CONTRAST
BRIGHTNESS
TINT
VOLUME
BASS
TREBLE
BALANCE
SURROUND
29
CHANNEL POSITION INDICATION (0 to 49)
BILINGUAL INDICATOR (Orange)
STEREO INDICATOR (Orange)
WOOFER INDICATOR (Orange)
SURROUND INDICATOR (Yellow)
POWER INDICATOR (Red)
MAINS ON/OFF SWITCH
TO OPEN THE DOOR, PUSH THE UPPER EDGE TO PULL IT TOWARDS YOU.
BEHIND DOOR
SYSTEME
FRANCE
B/G
M
A
U
VL
VH
TV2
ACCORD
SYSTEM SWITCH
AFC SWITCH
CHANNEL BAND SWITCH
TUNING INDICATOR
TUNING
COLOUR
BRIGHTNESS
CONTRAST
TINT
WOOFER
WOOFER LEVEL
VOLUME DOWN (▼)
MFT DOWN (▼)
MEMORY
CHANNEL DOWN (▼)
LEVEL DOWN (▼)
SOUND-CONTROL
TV-21 PIN/VIDEO
SURROUND CONTROL
VOLUME UP (▲)
MFT UP
CHANNEL UP (▲)
LEVEL UP (▲)
PICTURE-CONTROL
AUTO SEARCH MEMORY
SYSTEM SWITCH
CH
B
A
C
SYSTEME
WOOFER
PICTURE NR
WOOFER ON/OFF
PICTURE NOISE REDUCER
HEADPHONE JACK

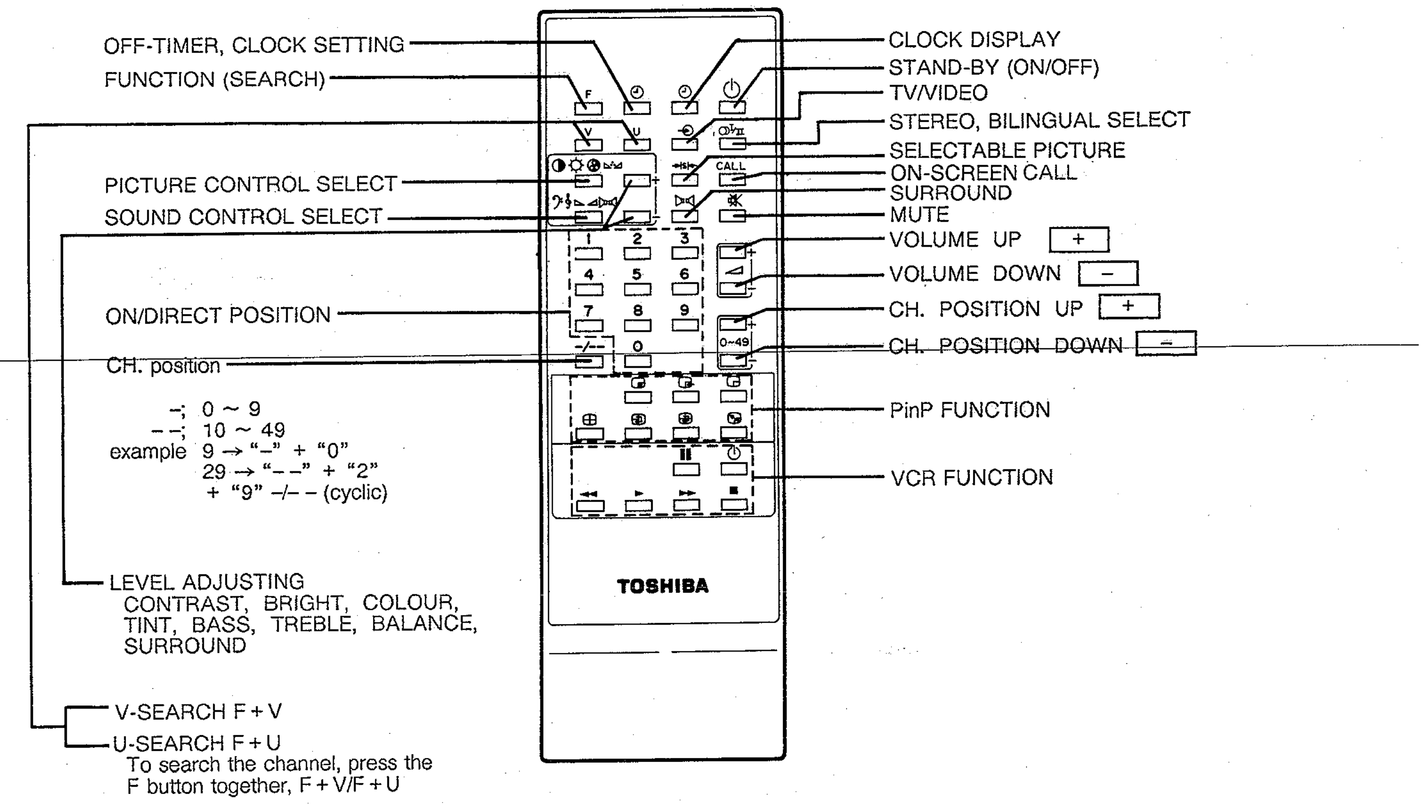
■ BACK


(1)
(2)AUDIO/VIDEO
D
(+)
G
D
(–)
G
INT
EXT
AUDIO VARIABLE
D
G
AUDIO
S-VIDEO
ATT.
M
A
21 PIN (1) SOCKET
21 PIN (2) SOCKET
(AUDIO/VIDEO ONLY)
HORIZONTAL
PICTURE POSITION
AERIAL SOCKET
S-VIDEO INPUT SOCKET
AUDIO INPUT
VARIABLE AUDIO OUTPUT
EXTERNAL SPEAKER SWITCH
EXTERNAL SPEAKER TERMINAL

ATT Switch

When visual interface phenomenon appears, turn the ATT switch button into the ON side by use of small screw driver and the like.

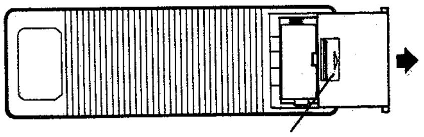
■ REMOTE CONTROL HAND UNIT


OFF-TIMER, CLOCK SETTING
FUNCTION (SEARCH)
PICTURE CONTROL SELECT
SOUND CONTROL SELECT
ON/DIRECT POSITION
CH. position
–; 0 ~ 9
– –; 10 ~ 49
example 9 → "–" + "0"
29 → "– –" + "2"
+ "9" -/– – (cyclic)
LEVEL ADJUSTING
CONTRAST, BRIGHT, COLOUR, TINT, BASS, TREBLE, BALANCE, SURROUND
V-SEARCH F + V
U-SEARCH F + U
To search the channel, press the F button together, F + V/F + U
CLOCK DISPLAY
STAND-BY (ON/OFF)
TV/VIDEO
STEREO, BILINGUAL SELECT
SELECTABLE PICTURE
ON-SCREEN CALL
SURROUND
MUTE
VOLUME UP +
VOLUME DOWN –
CH. POSITION UP +
CH. POSITION DOWN –
PinP FUNCTION
VCR FUNCTION
F
V
U
CALL
1
2
3
4
5
6
7
8
9
0
-/--
0~49
TOSHIBA

Before operating

INSTALLING THE BATTERIES

1. Remove the battery cover.
2. Insert the two "AA" (pencil size) 1.5V batteries making sure the polarity (+ or –) of the batteries matches the polarity marks inside the unit.
3. Close the battery cover.

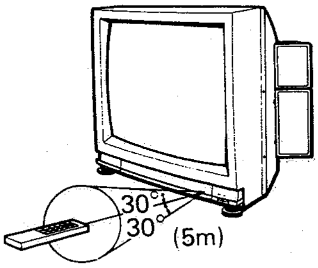


Press and slide to open.

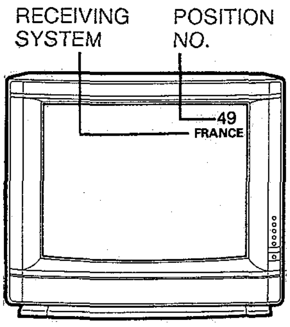
TIPS FOR REMOTE OPERATION

- If intermittent remote control operation occurs, replace the batteries according to "INSTALLING THE BATTERIES."
- The battery life should be about a year under normal use.
- When the Remote Control Hand Unit is not used for a long period of time or when the batteries are worn out, take out the batteries to prevent liquid leak.
- Do not throw the batteries into a fire. Dispose of used batteries in the specified places.
- Take care not to drop, dampen, disassemble the Remote Control Hand Unit.

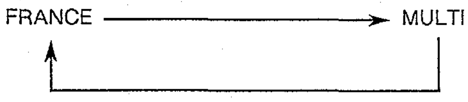
Effective Range



COLOUR SYSTEM SELECTION



SYSTEM SWITCH OPERATION



RECEIVING SYSTEM

- FRANCE SECAM – L
- MULTI PAL, SECAM, 4.43NTSC can be received.

Note:
Colour system indication is displayed in green when the TV is switched on automatic mode and in cyan when switched on manual mode.

Receiving Systems				Function
System	Main Tuner	Sub Tuner	Video IN	
1. *PAL B/G*	○	○	○	*Reception of broadcast and playback for video* cassette recorder
2. PAL I	○	X	○	
3. PAL D/K	○	X	○	
4. SECAM B/G	○	○	○	
5. SECAM D/K, K1	○	X	○	
6. NTSC M	X	X	X	
7. *NTSC 4.43/5.5MHz*	○	○	○	*Playback for special* video cassette recorder
8. NTSC 4.43/6.0MHz	○	X	○	
9. NTSC 4.43/6.5MHz	○	X	○	
10. NTSC 3.58/5.5MHz	X	X	X	
11. NTSC 3.58/6.0MHz	X	X	X	
12. NTSC 3.58/6.5MHz	X	X	X	
13. *SECAM I (6.0MHz)*	○	X	○	
14. SECAM L	○	○	○	
15. NTSC 3.58/4.5MHz/50Hz	X	X	X	Playback for special video disk, CDV player
16. PAL 5.5MHz/60Hz	○	○	○	
17. PAL 6.0MHz/60Hz	○	X	○	
18. PAL 6.5MHz/60Hz	○	X	○	
19. *SECAM 5.5MHz/60Hz*	○	○	○	
20. SECAM 6.0MHz/60Hz	○	X	○	
21. SECAM 6.5MHz/60Hz	○	X	○	

Main tuner

Receiving channels

- Regular TV VHF BAND
  2 – 12 (PAL/SECAM – B)
  1 – 12 (PAL/SECAM – D)
  2 – 9 (SECAM – K1)
  B – C, 1 – 6 (SECAM – L)
- Regular TV UHF BAND
  21 – 69 (PAL/SECAM – G, SECAM – L)
  21 – 69 (SECAM – K)
  13 – 56 (PAL – K)
  21 – 68 (PAL – I)
- CATV BAND
  B ~ Q (70 ~ 86) (SECAM – L)
  S3 ~ S20 (PAL/SECAM – B, G)

Sub tuner

Receiving channels

- Regular TV VHF BAND
  2 – 12 (PAL/SECAM – B)
  1 – 6 (SECAM – L)
- Regular TV UHF BAND
  21 – 69 (PAL/SECAM – G, SECAM – L)

■ COUNTERMEASURES AGAINST MALFUNCTION IN FRINGE AREA

1. **In Case Abnormal Signals Were Memoried by Auto Search**
   If you mind this, reset the memory by MFT (Manual Fine Tuning) from the position after the one where the abonormal signals were memorized.

Example:

(1) In the case of receiving successive channels.
(2) *In using video tape reproduced repeatedly.*
(3) When receiving different systems in the vicinity of border where receiving conditions are bad.
(4) In the area when strong and week electric fields are mixed in the channels.

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 110 ~ 245 volts 50/60Hz AC two pin power outlet.

Turn the receiver ON and adjust the FINE TUNING for best picture detail with the AFC turned OFF.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least one hour in order that the automatic degaussing circuit operates properly.

Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source If colour shading still persists, perform the COLOUR PURITY ADJUST-MENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

+145 VOLT POWER SUPPLY ADJUSTMENT (R851)

CAUTION: +B voltage closely relates to the high voltage.
To prevent hazardous X-RAY RADIATION, the +B voltage must be properly adjusted to +145 volts.

1. Tune in an active channel. Adjust the BRIGHTNESS and CONTRAST Controls for normal picture.
2. Check that the AC power line voltage is normal. (AC 220 volts, 50 Hz)
3. Connect a VTVM between L805 on POWER Board and chassis ground.
4. Adjust the +B ADJ. (R851) on POWER Board for +145 volts reading. Remove the VTVM.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 32kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 32kV under any conditions.

HEIGHT ADJUSTMENT

HEIGHT Control (R351) on Back Terminal Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS.(T461) for well defined scanning lines in the centre area on the screen.

HORIZONTAL CENTER ADJUSTMENT

1. Receive the WG PHILIPS pattern.
2. Set the contrast and colour to minimum, and the brightness to maximum.
3. Adjust H. CENTER Control (R451) so the pattern center can be located at the screen center.

PICTURE WIDTH AND DISTORTION ADJUSTMENT (Width, Pincusion Distortion, Trapezoid Distortion)

1. Perform this adjustment after +B and H. CENTER adjustment are completed.
2. Receive the WG PHILIPS pattern.
3. Set the contrast and colour to minimum, and the brightness to maximum.
4. Adjust H. WIDTH Control (R358) for the horizontal width so that the white flags on left and right of the pattern are just hidden.
5. Adjust DPC Control (R359) to correct the vertical line on left and right straight.
6. Adjust KEYSTONE Control (R356) to correct the trapezoid distortion.
7. Readjust WIDTH Control (R358) for the precision.

BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal Pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

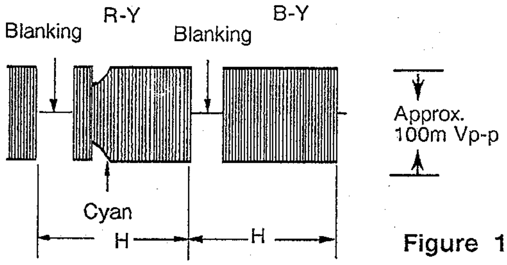


Figure 1.

IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 62 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchroscope from the pin 62 to the pin 60 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

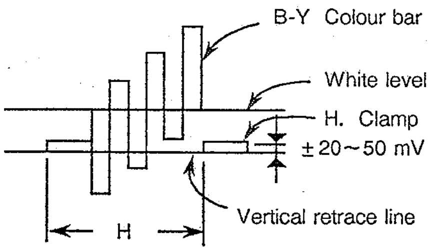


Figure 2.

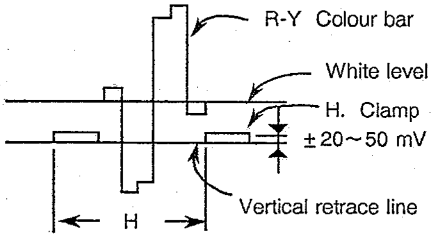


Figure 3.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme PAL Philips pattern.
2. Set the COLOUR Control VR. to obtain the proper colour.
3. If the PAL MATRIX adjustment is in correct, the venetian Blind would appear in the colour bars area. The case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. Remove the capacitor, and if the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear when the capacitor is connected.

SIF DET. ADJUSTMENT L674 FOR 6.0MHz

1. Supply +12V to the System Switch Board.
2. Connect 10k ohm resistor between pin 18 of IC670 and ground.
3. Supply +3V DC to terminal "TP-14" on Main Board through 100 ohm resistor.
4. Connect the 6.0MHz signal (Modulation: 400Hz/15kHz deviation, 100dBμ) of SIF S.G. to pin 2 of IC674 through a capacitor 0.01μF.
5. Connect the millivoltmeter to pin 9 of IC674.
6. Adjust L674 for the maximum reading on the meter.

C651 FOR 4.5MHz

1. Supply +12V to the System Switch Board.
2. Connect 10k ohm resistor between pins 18 and 22 of IC670.
3. Supply +3V DC to terminal "TP-14" on Main Board to deactivate PIF circuit.
4. Connect the 4.5MHz signal (Modulation: 400Hz/7.5kHz deviation, 100dBμ) of SIF S.G. to pin 2 of IC674 through a capacitor 0.01μF.
5. Connect the millivoltmeter to pin 9 of IC674.
6. Adjust the variable capacitor (C651) for the maximum reading on the meter.

SIF DET. ADJUSTMENT 6.0MHz OSC. COIL (L672)

1. Supply +12V to the System SW. Board.
2. Short the C677 (R693 side) through a 10k ohm resistor to gorund.
3. Apply the 6.0MHz signal (No modulation, 100dBμ) of SIF S.G. to pin 12 of IC670 through a capacitor 0.01μF.
4. Connect oscilloscope to pin 9 of ICS01.
5. Adjust L672 so that the response on oscilloscope can be maximum.

SIF DET. ADJUSTMENT 5.5MHz OSC. COIL (L671)

1. Supply +12V to the SYSTEM SW. Board.
2. Supply +9V to Anode of D304 through 10k ohm resistor.
3. Apply the 5.5MHz signal (No modulation, 100dBμ) of SIF S.G. to pin 27 of IC670 through a capacitor 0.01μF.
4. Connect oscilloscope or DC voltmeter to C677 (R693) side.)
5. Adjust L671 so that the response on oscilloscope or DC voltmeter can become +4.5V.

COLOUR PURITY ADJUSTMENT

Note : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes. Purity adjustment requires Rubber Wedge kit.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Turn the CONTRAST and BRIGHTNESS Controls to maximum.
3. Adjust RED and BLUE CUT OFF controls (R557 and R559) to provide only a green raster. Advance the GREEN CUT OFF control (R558) if necessary.
4. Loosen the clamp screw holding the yoke, and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet (See figure 5) around the neck of the picture tube until a green belt is obtained in the centre of the screen. And at the same time, centre the raster vertically by adjusting the magnet.
7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw.
8. Check the purity of the red and blue raster by adjusting the CUT OFF Controls.
9. Tighten the clamp screw of the yoke temporarily.
10. Obtain a white raster; referring to "CRT GREY SCALE ADJUSTMENT".
11. Proceed with convergence adjustment.

CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Turn the SCREEN Control (on T461) fully counter-clockwise.
3. Set the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) to the mid position.
4. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
5. Set the SERVICE SW. (S202) in the H. line position.
6. Set the CONTRAST, COLOUR Controls to minimum and BRIGHTNESS Control to centre position.
7. Rotate the SCREEN Control gradually clockwise until the first line appears slightly on the screen.
   Then turn fully counterclockwise the two CUT OFF Controls corresponding to the colours of the first and the second horizontal lines to eliminate the lines.
8. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen.
   Set the SCREEN Control to this position.
   At the base of the colour, rotate the remaining two CUT OFF Controls gradually clockwise until the horizontal lines of each colour appear sightly on the screen.
9. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE).
   The lines may look like white if the CUT OFF Controls are adjusted properly.
10. Return the SERVICE SW. (S202) in the Receiving position.
11. Set the BRIGHTNESS Control to the maximum and COLOUR control to the minimum.
12. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
13. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the maximum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the centre.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

CONVERGENCE ADJUSTMENTS

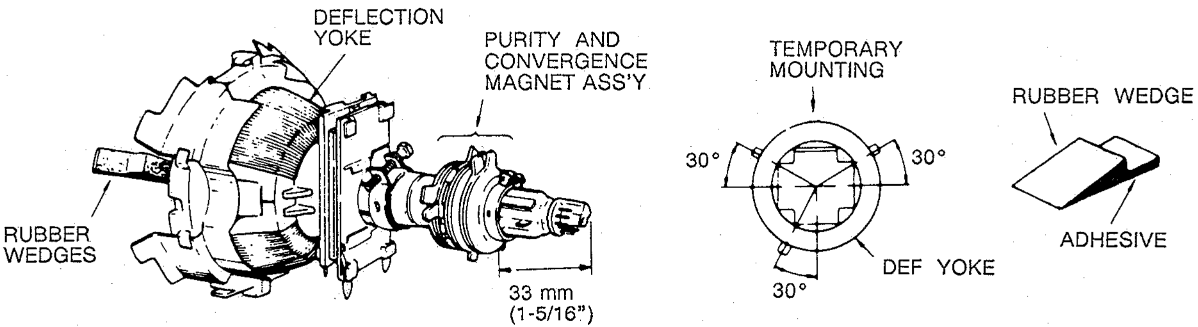
Note : Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ Centre Convergence Adjustment

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 5.) and superimpose red and blue vertical lines in the centre area of the picture screen. (See figure 6.)
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen. (See figure 6.)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 with understanding red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual affection and it makes dots movement complex.

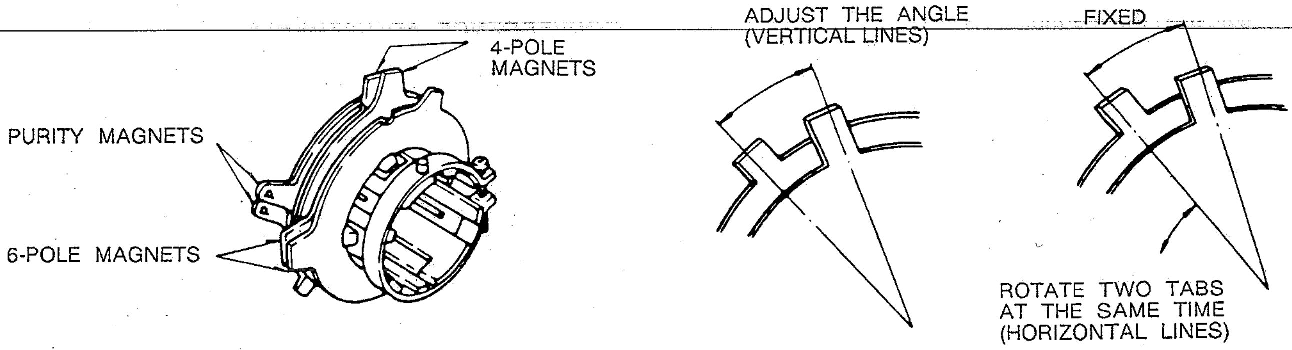
■ Circumference Convergence Adjustment

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in figure 4. temporalily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 6.) Push the mounted wedge into the space between picture tube and yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 6.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick 3 adhesive tapes on wedges.


DEFLECTION YOKE
PURITY AND CONVERGENCE MAGNET ASS'Y
RUBBER WEDGES
33 mm (1-5/16")
TEMPORARY MOUNTING
30°
30°
30°
DEF YOKE
RUBBER WEDGE
ADHESIVE

RUBBER WEDGES LOCATION

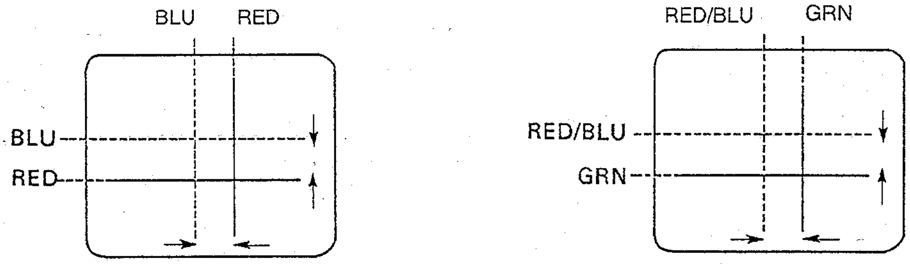
Figure 4.


4-POLE MAGNETS
PURITY MAGNETS
6-POLE MAGNETS
ADJUST THE ANGLE (VERTICAL LINES)
FIXED
ROTATE TWO TABS AT THE SAME TIME (HORIZONTAL LINES)

CONVERGENCE MAGNET ASSEMBLY

ADJUSTMENT OF MAGNETS

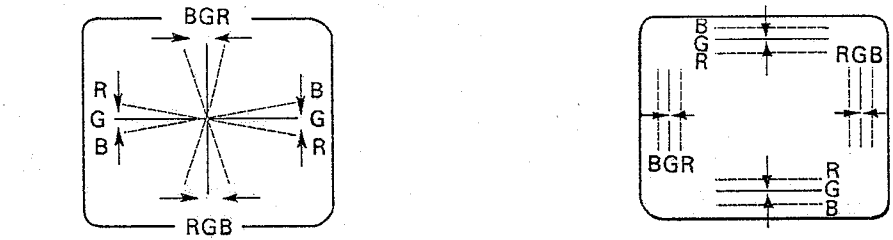
Figure 5.


BLU
RED
BLU
RED
RED/BLU
GRN
RED/BLU
GRN

4-POLE MAGNETS MOVEMENT

6-POLE MAGNETS MOVEMENT

Center Convergence by Convergence Magnets


BGR
R
G
B
B
G
R
RGB
B
G
R
RGB
BGR
R
G
B

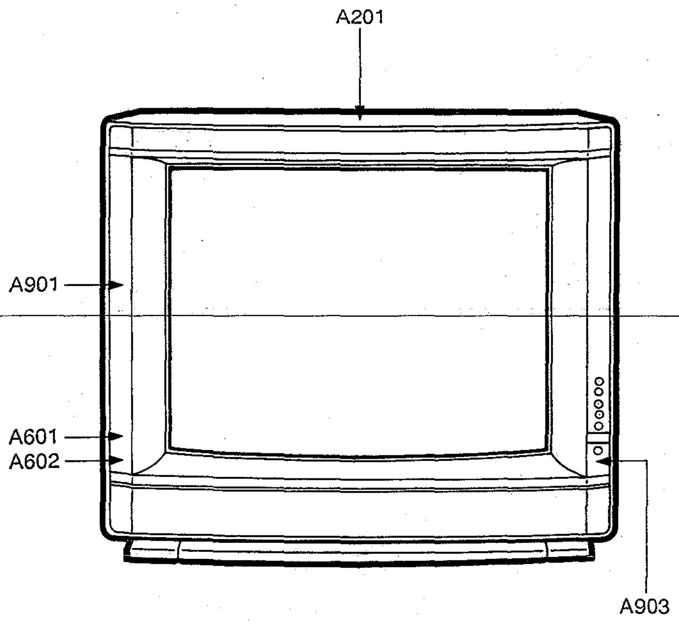
INCLINE THE YOKE UP (OR DOWN)

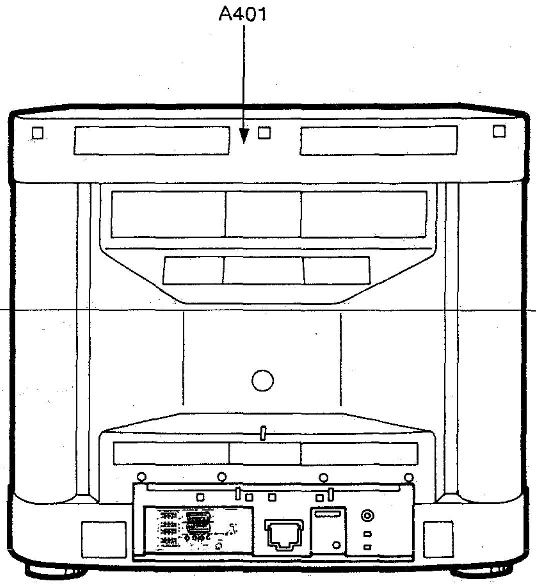
INCLINE THE YOKE RIGHT (OR LEFT)

Circumference Convergence by DEF Yoke

Figure 6. Dot Movement Pattern.

CABINET REPLACEMENT PARTS LIST





Location No.	Part No.	Description
A201	23418430	Front Cover
A210	23864240	Speaker Frame (Right)
A211	23864241	Speaker Frame (Left)
A401	23423354	Back Cover
A508	23035010	Screw, PBI 4X16
A521	23035010	Screw, PBI 4X16
A601	23443374	Knob, Small square
A602	23443043	Knob, Sub
A701	23523386	Carton Box
A702	23934481	Packing
A705	23931720	Separator
A706	23934199	Packing, Sub
A901	23423352	Door
A903	23443352	Knob, POWER
A905	23805374	Leg (Right)
A906	23805375	Leg (Left)
A908	23848047	Damper
Y101	23994771	Owner's Guidebook

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" , "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

ABBREVIATIONS:

Capacitors......... CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
Resistors........... CF : Carbon Film CC : Carbon Composition MF : Metal Film
OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor
(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C101	24707474	Tantalum, 0.47µF, ±20%, 35V
C102	24538473	PF, 0.047µF
C103	24232103	CD, 0.01µF, +80%, −20%
C104	24636229	EL, 2.2µF, 50V
C105	24232103	CD, 0.01µF, +80%, −20%
C106	24232103	CD, 0.01µF, +80%, −20%
C107	24794101	EL, 100µF, 16V
C108	24797220	EL, 22µF, 50V
C109	24212102	CD, 1000pF, ±10%
C110	24212102	CD, 1000pF, ±10%
C111	24212102	CD, 1000pF, ±10%
C112	24636478	EL, 0.47µF, 50V
C113	24538153	PF, 0.015µF
C114	24085988	EL, 1µF, ±20%, 50V, Non-Polar
C115	24212102	CD, 1000pF, ±10%
C116	24232103	CD, 0.01µF, +80%, −20%
C117	24232103	CD, 0.01µF, +80%, −20%
C118	24232103	CD, 0.01µF, +80%, −20%
C119	24212102	CD, 1000pF, ±10%
C120	24212102	CD, 1000pF, ±10%
C121	24212102	CD, 1000pF, ±10%
C122	24212102	CD, 1000pF, ±10%
C123	24232103	CD, 0.01µF, +80%, −20%
C124	24212102	CD, 1000pF, ±10%
C125	24212102	CD, 1000pF, ±10%
C126	24212102	CD, 1000pF, ±10%
C127	24212102	CD, 1000pF, ±10%
C128	24212102	CD, 1000pF, ±10%
C129	24212102	CD, 1000pF, ±10%
C130	24232103	CD, 0.01µF, +80%, −20%
C131	24797470	EL, 47µF, 50V
C132	24232103	CD, 0.01µF, +80%, −20%
C133	24232103	CD, 0.01µF, +80%, −20%
C134	24636229	EL, 2.2µF, 50V
C135	24436820	CD, 82pF
C136	24636478	EL, 0.47µF, 50V
C137	24232103	CD, 0.01µF, +80%, −20%
C138	24232103	CD, 0.01µF, +80%, −20%
C139	24353220	CD, 22pF
C140	24797470	EL, 47µF, 50V
C141	24232103	CD, 0.01µF, +80%, −20%
C142	24232103	CD, 0.01µF, +80%, −20%
C143	24353080	CD, 8pF, ±0.25pF
C144	24232103	CD, 0.01µF, +80%, −20%
C145	24085987	EL, 4.7µF, ±20%, 16V, Non-Polar
C146	24593222	PF, 2200pF
C148	24212152	CD, 1500pF, ±10%
C151	24094959	Variable Capacitor, 2 to 12pF, 50V
C160	24797101	EL, 100µF, 50V
C161	24232103	CD, 0.01µF, +80%, −20%
C162	24232103	CD, 0.01µF, +80%, −20%
C163	24353390	CD, 39pF
C201	24636100	EL, 10µF, 50V
C202	24797101	EL, 100µF, 50V
C203	24232103	CD, 0.01µF, +80%, −20%
C204	24797220	EL, 22µF, 50V
C205	24206478	EL, 0.47µF, 50V
C208	24212102	CD, 1000pF, ±10%
C209	24232103	CD, 0.01µF, +80%, −20%
C210	24636100	EL, 10µF, 50V
C211	24436471	CD, 470pF
C212	24436471	CD, 470pF
C213	24232103	CD, 0.01µF, +80%, −20%
C214	24538104	PF, 0.1µF
C215	24436151	CD, 150pF
C216	24797470	EL, 47µF, 50V
C217	24797470	EL, 47µF, 50V
C218	24797220	EL, 22µF, 50V
C219	24436270	CD, 27pF
C220	24794101	EL, 100µF, 16V
C221	24538474	PF, 0.47µF
C260	24633100	EL, 10µF, 16V
C261	24633330	EL, 33µF, 16V
C262	24085988	EL, 1µF, ±20%, 50V, Non-Polar
C263	24212152	CD, 1500pF, ±10%
C301	24636229	EL, 2.2µF, 50V

Location No.	Part No.	Description
C302	24212152	CD, 1500pF, ±10%
C303	24617915	EL, 1μF, ±10%, 50V
C304	24212102	CD, 1000pF, ±10%
C306	24693563	PF, 0.056μF, 100V
C307	24232103	CD, 0.01μF, +80%, −20%
C311	24796222	EL, 2200μF, 35V
C314	24214391	CD, 390pF, ±10%, 500V
C316	24795472	EL, 4700μF, 25V
C317	24617912	EL, 2.2μF, ±10%, 50V
C318	24082053	PF, 0.1μF, 100V
C319	24693272	PF, 2700pF, 100V
C320	24214152	CD, 1500pF, ±10%, 500V
C323	24591203	PF, 0.02μF
C325	24796221	EL, 220μF, 35V
C327	24603154	PF, 0.15μF, ±10%, 100V
C330	24794471	EL, 470μF, 16V
C331	24095678	PF, 0.22μF, ±10%, 100V
C362	24591432	PF, 4300pF
C363	24538473	PF, 0.047μF
C364	24212471	CD, 470pF, ±10%
C365	24798470	EL, 47μF, 100V
C366	24593472	PF, 4700pF
C368	24538104	PF, 0.1μF
C373	24538474	PF, 0.47μF
C374	24538223	PF, 0.022μF
C380	24593472	PF, 4700pF
C401	24636010	EL, 1μF, 50V
C402	24353271	CD, 270pF
C403	24636339	EL, 3.3μF, 50V
C405	24593203	PF, 0.02μF
C406	24593203	PF, 0.02μF
C407	24593243	PF, 0.024μF
C408	24617929	EL, 18μF, ±20%, 50V
C409	24232103	CD, 0.01μF, +80%, −20%
C412	24593182	PF, 1800pF
C413	24593182	PF, 1800pF
C416	24214331	CD, 330pF, ±10%, 500V
C417	24214222	CD, 2200pF, ±10%, 500V
C418	24677100	EL, 10μF, ±20%, 160V
C420	24436331	CD, 330pF
⚠ C440	24095888	PF, 0.01μF, ±3%, 1600V
C441	24214221	CD, 220pF, ±10%, 500V
⚠ C443	24095941	PF, 2000pF, ±3%, 1600V
C444	24829393	PF, 0.039μF, 400V
C445	24828473	PF, 0.047μF, 200V
C446	24640962	EL, 33μF, ±20%, 200V
C447	24640968	EL, 10μF, 400V
C448	24754222	EL, 2200μF, 25V
⚠ C463	24212222	CD, 2200pF, ±10%
⚠ C464	24095908	PF, 3300pF, ±3%, 1600V
C466	24794471	EL, 470μF, 16V
C467	24095632	PF, 0.47μF, 200V
C468	24538474	PF, 0.47μF
C470	24082005	PF, 0.75μF, 200V
C471	24095759	PF, 0.39μF, 200V
C473	24640933	EL, 1μF, ±20%
C474	24095682	PF, 0.12μF, 200V
C501	24797220	EL, 22μF, 50V
C505	24593273	PF, 0.027μF
C506	24593273	PF, 0.027μF
C507	24593103	PF, 0.01μF
C508	24085028	EL, 2.2μF, 25V, Non-Polar
C509	24353330	CD, 33pF
C510	24232103	CD, 0.01μF, +80%, −20%

Location No.	Part No.	Description
C511	24232103	CD, 0.01μF, +80%, −20%
C512	24353200	CD, 20pF
C515	24636010	EL, 1μF, 50V
C516	24538104	PF, 0.1μF
C517	24538104	PF, 0.1μF
C518	24232103	CD, 0.01μF, +80%, −20%
C519	24232103	CD, 0.01μF, +80%, −20%
C520	24206478	EL, 0.47μF, 50V
C521	24538474	PF, 0.47μF
C522	24538474	PF, 0.47μF
C523	24538474	PF, 0.47μF
C524	24232103	CD, 0.01μF, +80%, −20%
C525	24436121	CD, 120pF
C526	24436121	CD, 120pF
C527	24436121	CD, 120pF
C530	24794470	EL, 47μF, 16V
C531	24206100	EL, 10μF, 50V
C532	24436101	CD, 100pF
C533	24436101	CD, 100pF
C534	24436101	CD, 100pF
C535	24206100	EL, 10μF, 50V
C540	24436391	CD, 390pF
C541	24436391	CD, 390pF
C542	24436391	CD, 390pF
C544	24436101	CD, 100pF
C545	24436101	CD, 100pF
C601	24636010	EL, 1μF, 50V
C615	24636479	EL, 4.7μF, 50V
C616	24636479	EL, 4.7μF, 50V
C617	24636479	EL, 4.7μF, 50V
C618	24636229	EL, 2.2μF, 50V
C619	24212471	CD, 470pF, ±10%
C620	24538563	PF, 0.056μF
C621	24232103	CD, 0.01μF, +80%, −20%
C622	24436471	CD, 470pF
C623	24436471	CD, 470pF
C624	24085031	EL, 1μF, ±20%, 25V, Non-Polar
C625	24797470	EL, 47μF, 50V
C626	24085031	EL, 1μF, ±20%, 25V, Non-Polar
C627	24232103	CD, 0.01μF, +80%, −20%
C628	24538563	PF, 0.056μF
C629	24212471	CD, 470pF, ±10%
C630	24636100	EL, 10μF, 50V
C631	24796220	EL, 22μF, 35V
C632	24636229	EL, 2.2μF, 50V
C633	24593562	PF, 5600pF
C634	24636229	EL, 2.2μF, 50V
C635	24794101	EL, 100μF, 16V
C636	24636010	EL, 1μF, 50V
C637	24795221	EL, 220μF, 25V
C638	24636010	EL, 1μF, 50V
C640	24593562	PF, 5600pF
C642	24794101	EL, 100μF, 16V
C643	24538104	PF, 0.1μF
C644	24797471	EL, 470μF, 50V
C645	24538104	PF, 0.1μF
C646	24795102	EL, 1000μF, 25V
C647	24795102	EL, 1000μF, 25V
C649	24795470	EL, 47μF, 25V
C670	24436470	CD, 47pF
C671	24436470	CD, 47pF
C672	24232103	CD, 0.01μF, +80%, −20%

Location No.	Part No.	Description
C673	24797470	EL, 47μF, 50V
C674	24232103	CD, 0.01μF, +80%, −20%
C675	24212471	CD, 470pF, ±10%
C676	24212471	CD, 470pF, ±10%
C677	24353680	CD, 68pF
C678	24232103	CD, 0.01μF, +80%, −20%
C691	24203100	EL, 10μF, ±20%, 16V
C693	24203100	EL, 10μF, ±20%, 16V
C801	24095951	PF, 0.1μF, ±20%, AC250V
C802	24094654	CD, 470pF, ±20%, AC400V
C803	24094654	CD, 470pF, ±20%, AC400V
C804	24094655	CD, 1000pF, ±20%, AC400V
C805	24094655	CD, 1000pF, ±20%, AC400V
C806	24095951	PF, 0.1μF, ±20%, AC250V
C811	24092281	CD, 4700pF, ±20%, AC250V
C812	24092281	CD, 4700pF, ±20%, AC250V
C813	24092281	CD, 4700pF, ±20%, AC250V
C814	24092281	CD, 4700pF, ±20%, AC250V
C818	24086873	EL, 330μF, ±20%, 400V
C820	24636100	EL, 10μF, 50V
C824	24797221	EL, 220μF, 50V
C825	24212102	CD, 1000pF, ±10%
C826	24538104	PF, 0.1μF
C827	24598561	PF, 560pF
C828	24636100	EL, 10μF, 50V
C829	24757470	EL, 47μF, 100V
C830	24095931	PF, 2200pF, 1600V
C831	24633100	EL, 10μF, 16V
C832	24442181	CD, 180pF, ±10%, 2kV
C833	24086945	EL, 330μF, ±20%, 200V
C834	24636479	EL, 4.7μF, 50V
C835	24214221	CD, 220pF, ±10%, 500V
C836	24795222	EL, 2200μF, 25V
C837	24436561	CD, 560pF
C838	24598561	PF, 560pF
C839	24538154	PF, 0.15μF
C840	24636100	EL, 10μF, 50V
C842	24794470	EL, 47μF, 16V
C843	24794470	EL, 47μF, 16V
C844	24214221	CD, 220pF, ±10%, 500V
C845	24795222	EL, 2200μF, 25V
C846	24214221	CD, 220pF, ±10%, 500V
C847	24797222	EL, 2200μF, 50V
C849	24214221	CD, 220pF, ±10%, 500V
C860	24797102	EL, 1000μF, 50V
C861	24442391	CD, 390pF, ±10%, 2kV
C862	24636479	EL, 4.7μF, 50V
C864	24092030	CD, 680pF, ±10%, 2kV
C865	24214391	CD, 390pF, ±10%, 500V
C866	24214391	CD, 390pF, ±10%, 500V
C867	24538474	PF, 0.47μF
C869	24795221	EL, 220μF, 25V
C870	24636100	EL, 10μF, 50V
C871	24214391	CD, 390pF, ±10%, 500V
C872	24212101	CD, 100pF, ±10%
C873	24095951	PF, 0.1μF, ±20%, AC250V
C901	24640987	EL, 2.2μF, 350V
C902	24095981	PF, 2200pF, 1600V
CA01	24636478	EL, 0.47μF, 50V
CA02	24633100	EL, 10μF, 16V
CA03	24633100	EL, 10μF, 16V
CA04	24232103	CD, 0.01μF, +80%, −20%
CA05	24212102	CD, 1000pF, ±10%
CA08	24636100	EL, 10μF, 50V

Location No.	Part No.	Description
CA09	24353180	CD, 18pF
CA10	24636010	EL, 1μF, 50V
CA11	24436391	CD, 390pF
CA12	24436221	CD, 220pF
CA13	24636229	EL, 2.2μF, 50V
CA14	24232103	CD, 0.01μF, +80%, −20%
CA15	24538104	PF, 0.1μF
CA16	24538104	PF, 0.1μF
CA17	24538104	PF, 0.1μF
CA18	24206479	EL, 4.7μF, 50V
CA19	24206010	EL, 1μF, 50V
CA21	24206229	EL, 2.2μF, 50V
CA22	24794471	EL, 470μF, 16V
CA23	24212472	CD, 4700pF, ±10%
CA24	24232103	CD, 0.01μF, +80%, −20%
CA25	24206479	EL, 4.7μF, 50V
CA30	24636010	EL, 1μF, 50V
CA31	24212102	CD, 1000pF, ±10%
CA32	24436561	CD, 560pF
CA33	24212472	CD, 4700pF, ±10%
CA34	24212102	CD, 1000pF, ±10%
CA35	24436561	CD, 560pF
CA36	24212472	CD, 4700pF, ±10%
CA37	24636010	EL, 1μF, 50V
CA38	24232103	CD, 0.01μF, +80%, −20%
CA41	24212102	CD, 1000pF, ±10%
CA42	24436101	CD, 100pF
CB03	24436101	CD, 100pF
CB05	24232103	CD, 0.01μF, +80%, −20%
CB07	24538104	PF, 0.1μF
CG01	24538103	PF, 0.01μF
CG02	24538103	PF, 0.01μF
CG03	24797470	EL, 47μF, 50V
CG04	24797470	EL, 47μF, 50V
CG05	24538224	PF, 0.22μF
CG06	24538104	PF, 0.1μF
CG07	24538223	PF, 0.022μF
CG08	24538473	PF, 0.047μF
CG09	24794101	EL, 100μF, 16V
CG10	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CG11	24636100	EL, 10μF, 50V
CG12	24794101	EL, 100μF, 16V
CG13	24794101	EL, 100μF, 16V
CG14	24794101	EL, 100μF, 16V
CG15	24633100	EL, 10μF, 16V
CG16	24794101	EL, 100μF, 16V
CG18	24436151	CD, 150pF
CG19	24636100	EL, 10μF, 50V
CG20	24212102	CD, 1000pF, ±10%
CG21	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CG22	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CG23	24232103	CD, 0.01μF, +80%, −20%
CG24	24232103	CD, 0.01μF, +80%, −20%
CG25	24797220	EL, 22μF, 50V
CG26	24797220	EL, 22μF, 50V
CG27	24232103	CD, 0.01μF, +80%, −20%
CH01	24636010	EL, 1μF, 50V
CH02	24636010	EL, 1μF, 50V
CH03	24636010	EL, 1μF, 50V
CH07	24636100	EL, 10μF, 50V
CH08	24636010	EL, 1μF, 50V

Location No.	Part No.	Description
CH09	24636010	EL, 1μF, 50V
CH10	24636010	EL, 1μF, 50V
CH11	24636010	EL, 1μF, 50V
CH12	24636010	EL, 1μF, 50V
CH21	24636010	EL, 1μF, 50V
CH22	24636010	EL, 1μF, 50V
CH23	24436820	CD, 82pF
CK01	24232103	CD, 0.01μF, +80%, −20%
CK02	24232103	CD, 0.01μF, +80%, −20%
CK03	24232103	CD, 0.01μF, +80%, −20%
CK04	24636229	EL, 2.2μF, 50V
CK05	24232103	CD, 0.01μF, +80%, −20%
CK06	24232103	CD, 0.01μF, +80%, −20%
CK07	24794101	EL, 100μF, 16V
CK09	24636479	EL, 4.7μF, 50V
CK10	24794470	EL, 47μF, 16V
~~CK11~~	~~24232103~~	~~CD, 0.01μF, +80%, −20%~~
CK12	24232103	CD, 0.01μF, +80%, −20%
CK13	24636229	EL, 2.2μF, 50V
CK14	24436180	CD, 18pF
CK15	24636478	EL, 0.47μF, 50V
CK16	24797470	EL, 47μF, 50V
CK17	24232103	CD, 0.01μF, +80%, −20%
CK18	24232103	CD, 0.01μF, +80%, −20%
CK19	24212222	CD, 2200pF, ±10%
CK20	24353220	CD, 22pF
CK21	24212152	CD, 1500pF, ±10%
CK22	24636479	EL, 4.7μF, 50V
CK23	24232103	CD, 0.01μF, +80%, −20%
CK24	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CK25	24538153	PF, 0.015μF
CK26	24636478	EL, 0.47μF, 50V
CK27	24212102	CD, 1000pF, ±10%
CK28	24232103	CD, 0.01μF, +80%, −20%
CK29	24436470	CD, 47pF
CK30	24212102	CD, 1000pF, ±10%
CK31	24212102	CD, 1000pF, ±10%
CK32	24212102	CD, 1000pF, ±10%
CK33	24212102	CD, 1000pF, ±10%
CK34	24232103	CD, 0.01μF, +80%, −20%
CK35	24232103	CD, 0.01μF, +80%, −20%
CK36	24232103	CD, 0.01μF, +80%, −20%
CK37	24797220	EL, 22μF, 50V
CK38	24212102	CD, 1000pF, ±10%
CK39	24797101	EL, 100μF, 50V
CK40	24232103	CD, 0.01μF, +80%, −20%
CK41	24538473	PF, 0.047μF
CK42	24707474	Tantalum, 0.47μF, ±20%, 35V
CK43	24636229	EL, 2.2μF, 50V
CK44	24232103	CD, 0.01μF, +80%, −20%
CK45	24232103	CD, 0.01μF, +80%, −20%
CK46	24232103	CD, 0.01μF, +80%, −20%
CK47	24636100	EL, 10μF, 50V
CK48	24636010	EL, 1μF, 50V
CK49	24538473	PF, 0.047μF
CK61	24598821	PF, 820pF
CK62	24232103	CD, 0.01μF, +80%, −20%
CK63	24797470	EL, 47μF, 50V
CK64	24212102	CD, 1000pF, ±10%
CK65	24212102	CD, 1000pF, ±10%
CK66	24212102	CD, 1000pF, ±10%
CK67	24232103	CD, 0.01μF, +80%, −20%

Location No.	Part No.	Description
CK68	24212102	CD, 1000pF, ±10%
CK69	24436470	CD, 47pF
CK70	24636229	EL, 2.2μF, 50V
CK71	24232103	CD, 0.01μF, +80%, −20%
CK72	24232103	CD, 0.01μF, +80%, −20%
CK73	24636229	EL, 2.2μF, 50V
CM01	24436201	CD, 200pF
CM02	24436201	CD, 200pF
CM05	24232103	CD, 0.01μF, +80%, −20%
CM06	24357270	CD, 27pF
CM07	24538563	PF, 0.056μF
CM08	24232103	CD, 0.01μF, +80%, −20%
CM09	24232103	CD, 0.01μF, +80%, −20%
CM10	24436270	CD, 27pF
CN10	24436101	CD, 100pF
CN11	24436330	CD, 33pF
~~CN15~~	~~24436220~~	~~CD, 22pF~~
CN16	24232103	CD, 0.01μF, +80%, −20%
CN17	24436100	CD, 10pF, ±0.25pF
CN18	24232103	CD, 0.01μF, +80%, −20%
CP01	24436681	CD, 680pF
CP02	24085032	EL, 3.3μF, ±20%, 16V, Non-Polar
CP04	24636100	EL, 10μF, 50V
CP05	24232103	CD, 0.01μF, +80%, −20%
CP09	24212102	CD, 1000pF, ±10%
CP10	24212102	CD, 1000pF, ±10%
CP11	24436681	CD, 680pF
CP14	24232103	CD, 0.01μF, +80%, −20%
CP18	24212102	CD, 1000pF, ±10%
CP19	24212102	CD, 1000pF, ±10%
CP20	24085032	EL, 3.3μF, ±20%, 16V, Non-Polar
CP21	24232103	CD, 0.01μF, +80%, −20%
CP22	24593132	PF, 1300pF
CP23	24593132	PF, 1300pF
CP24	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CP26	24593132	PF, 1300pF
CP27	24593132	PF, 1300pF
CP28	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CP30	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CP32	24636100	EL, 10μF, 50V
CP35	24794471	EL, 470μF, 16V
CP36	24538104	PF, 0.1μF
CP37	24206478	EL, 0.47μF, 50V
CP38	24538104	PF, 0.1μF
CP39	24538104	PF, 0.1μF
CP40	24538104	PF, 0.1μF
CP41	24232103	CD, 0.01μF, +80%, −20%
CP42	24593102	PF, 1000pF
CP43	24538104	PF, 0.1μF
CP44	24593243	PF, 0.024μF
CP45	24436271	CD, 270pF
CP47	24636339	EL, 3.3μF, 50V
CP48	24636229	EL, 2.2μF, 50V
CP49	24212152	CD, 1500pF, ±10%
CP62	24353330	CD, 33pF
CP63	24353200	CD, 20pF
CP64	24538473	PF, 0.047μF
CP65	24085028	EL, 2.2μF, 25V, Non-Polar

Location No.	Part No.	Description
CP66	24538103	PF, 0.01μF
CP67	24232103	CD, 0.01μF, +80%, −20%
CP68	24538473	PF, 0.047μF
CP69	24538473	PF, 0.047μF
CP70	24436101	CD, 100pF
CP71	24436100	CD, 10pF, ±0.25pF
CP72	24232103	CD, 0.01μF, +80%, −20%
CP73	24232103	CD, 0.01μF, +80%, −20%
CP74	24232103	CD, 0.01μF, +80%, −20%
CP75	24357270	CD, 27pF
CP76	24636478	EL, 0.47μF, 50V
CP77	24232103	CD, 0.01μF, +80%, −20%
CP78	24232103	CD, 0.01μF, +80%, −20%
CP79	24232103	CD, 0.01μF, +80%, −20%
CP81	24633220	EL, 22μF, 16V
CP83	24436201	CD, 200pF
~~CP84~~	~~24436201~~	~~CD, 200pF~~
CP86	24436330	CD, 33pF
CP88	24232103	CD, 0.01μF, +80%, −20%
CP89	24436220	CD, 22pF
CP92	24436301	CD, 300pF
CP93	24593122	PF, 1200pF
CP94	24636100	EL, 10μF, 50V
CP95	24436181	CD, 180pF
CP96	24436330	CD, 33pF
CS01	24538393	PF, 0.039μF
CS02	24538124	PF, 0.12μF
CS03	24636100	EL, 10μF, 50V
CS04	24636010	EL, 1μF, 50V
CS05	24538223	PF, 0.022μF
CS06	24636100	EL, 10μF, 50V
CS08	24538393	PF, 0.039μF
CS09	24538393	PF, 0.039μF
CS10	24593392	PF, 3900pF
CS11	24636478	EL, 0.47μF, 50V
CS12	24636478	EL, 0.47μF, 50V
CS13	24636100	EL, 10μF, 50V
CS14	24636100	EL, 10μF, 50V
CS15	24636100	EL, 10μF, 50V
CS16	24636100	EL, 10μF, 50V
CS17	24636229	EL, 2.2μF, 50V
CS18	24636100	EL, 10μF, 50V
CS19	24636100	EL, 10μF, 50V
CS20	24636100	EL, 10μF, 50V
CS21	24636229	EL, 2.2μF, 50V
CS22	24636229	EL, 2.2μF, 50V
CS23	24795471	EL, 470μF, 25V
CS24	24636010	EL, 1μF, 50V
CS25	24794101	EL, 100μF, 16V
CS26	24538473	PF, 0.047μF
CS27	24538473	PF, 0.047μF
CS28	24636010	EL, 1μF, 50V
CS29	24797101	EL, 100μF, 50V
CS30	24797220	EL, 22μF, 50V
CS31	24538104	PF, 0.1μF
CS32	24538104	PF, 0.1μF
CS33	24636229	EL, 2.2μF, 50V
CS40	24794470	EL, 47μF, 16V
CS41	24633220	EL, 22μF, 16V
CS42	24763471	EL, 470μF, ±20%, 16V
CS45	24538563	PF, 0.056μF
CS46	24636100	EL, 10μF, 50V
CV01	24085988	EL, 1μF, ±20%, 50V, Non-Polar

Location No.	Part No.	Description
CV02	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CV03	24636100	EL, 10μF, 50V
CV04	24636010	EL, 1μF, 50V
CV05	24636010	EL, 1μF, 50V
CV06	24636100	EL, 10μF, 50V
CV07	24232103	CD, 0.01μF, +80%, −20%
CV08	24636010	EL, 1μF, 50V
CV09	24636010	EL, 1μF, 50V
CV10	24636100	EL, 10μF, 50V
CV11	24636010	EL, 1μF, 50V
CV12	24636010	EL, 1μF, 50V
CV13	24636100	EL, 10μF, 50V
CV14	24797101	EL, 100μF, 50V
CV15	24232103	CD, 0.01μF, +80%, −20%
CV16	24232103	CD, 0.01μF, +80%, −20%
~~CV17~~	~~24636010~~	~~EL, 1μF, 50V~~
CV18	24636100	EL, 10μF, 50V
CV21	24232103	CD, 0.01μF, +80%, −20%
CV22	24636100	EL, 10μF, 50V
CV23	24636100	EL, 10μF, 50V
CV24	24636100	EL, 10μF, 50V
CV25	24436101	CD, 100pF
CV26	24636010	EL, 1μF, 50V
CV27	24436100	CD, 10pF, ±0.25pF
CV28	24202221	EL, 220μF, ±20%, 10V
CV29	24202221	EL, 220μF, ±20%, 10V
CV30	24636010	EL, 1μF, 50V
CV31	24636010	EL, 1μF, 50V
CV32	24636010	EL, 1μF, 50V
CV33	24232103	CD, 0.01μF, +80%, −20%
CV34	24202221	EL, 220μF, ±20%, 10V
CV35	24202221	EL, 220μF, ±20%, 10V
CV36	24636100	EL, 10μF, 50V
CV40	24636100	EL, 10μF, 50V
CW01	24232103	CD, 0.01μF, +80%, −20%
CW02	24633100	EL, 10μF, 16V
CW04	24636100	EL, 10μF, 50V
CW05	24232103	CD, 0.01μF, +80%, −20%
CW06	24636010	EL, 1μF, 50V
CW07	24636100	EL, 10μF, 50V
CW08	24636100	EL, 10μF, 50V
CW10	24794470	EL, 47μF, 16V
CX02	24538104	PF, 0.1μF
CX03	24538104	PF, 0.1μF
CX04	24538104	PF, 0.1μF
CX60	24436271	CD, 270pF
CX61	24436271	CD, 270pF
CX62	24436271	CD, 270pF
CX63	24436271	CD, 270pF
CX64	24232103	CD, 0.01μF, +80%, −20%
CX65	24797470	EL, 47μF, 50V
CX66	24232103	CD, 0.01μF, +80%, −20%
CX67	24232103	CD, 0.01μF, +80%, −20%
CX68	24636010	EL, 1μF, 50V
CX69	24636010	EL, 1μF, 50V
CX70	24636010	EL, 1μF, 50V
CX71	24636010	EL, 1μF, 50V
CX72	24636010	EL, 1μF, 50V
CX73	24636100	EL, 10μF, 50V
CX74	24636010	EL, 1μF, 50V
CX75	24636100	EL, 10μF, 50V
CX76	24797220	EL, 22μF, 50V
CX77	24436680	CD, 68pF

Location No.	Part No.	Description
CX78	24636100	EL, 10µF, 50V
CX80	24232103	CD, 0.01µF, +80%, −20%
CX81	24636100	EL, 10µF, 50V
CX82	24794470	EL, 47µF, 16V
CY01	24636479	EL, 4.7µF, 50V
CY02	24436101	CD, 100pF
CY03	24436271	CD, 270pF
CY04	24436271	CD, 270pF
CY05	24636479	EL, 4.7µF, 50V
CY06	24436101	CD, 100pF
CY07	24436101	CD, 100pF
CY08	24436101	CD, 100pF
CY09	24436331	CD, 330pF
CY10	24436221	CD, 220pF
CY11	24436221	CD, 220pF
CY12	24232103	CD, 0.01µF, +80%, −20%
CY13	24797470	EL, 47µF, 50V
CY14	24085988	EL, 1µF, ±20%, 50V, Non-Polar
CY15	24636220	EL, 22µF, 50V
CY16	24636100	EL, 10µF, 50V
CY17	24636479	EL, 4.7µF, 50V
CY18	24212102	CD, 1000pF, ±10%
CY19	24636100	EL, 10µF, 50V

RESISTORS

Location No.	Part No.	Description
R101	24366102	CF, 1k ohm
R102	24366103	CF, 10k ohm
R103	24366104	CF, 100k ohm
R104	24366222	CF, 2200 ohm
R105	24366153	CF, 15k ohm
R106	24366332	CF, 3300 ohm
R107	24366124	CF, 120k ohm
R108	24366222	CF, 2200 ohm
R109	24366222	CF, 2200 ohm
R110	24366684	CF, 680k ohm
R111	24366513	CF, 51k ohm
R112	24366753	CF, 75k ohm
R113	24366242	CF, 2400 ohm
R114	24366183	CF, 18k ohm
R115	24366561	CF, 560 ohm
R116	24366271	CF, 270 ohm
R117	24366332	CF, 3300 ohm
R118	24366821	CF, 820 ohm
R119	24366103	CF, 10k ohm
R120	24366473	CF, 47k ohm
R121	24366152	CF, 1500 ohm
R122	24366103	CF, 10k ohm
R123	24366103	CF, 10k ohm
R124	24366682	CF, 6800 ohm
R125	24366562	CF, 5600 ohm
R126	24552101	OMF, 100 ohm, 1/2W
R128	24366680	CF, 68 ohm
R129	24366102	CF, 1k ohm
R130	24366390	CF, 39 ohm
R131	24366680	CF, 68 ohm
R132	24366682	CF, 6800 ohm
R133	24366562	CF, 5600 ohm
R134	24552101	OMF, 100 ohm, 1/2W
R135	24366562	CF, 5600 ohm
R136	24366562	CF, 5600 ohm
R137	24366152	CF, 1500 ohm
R138	24366102	CF, 1k ohm
R139	24366390	CF, 39 ohm
R140	24366562	CF, 5600 ohm
R141	24366103	CF, 10k ohm
R142	24366473	CF, 47k ohm
R143	24366103	CF, 10k ohm
R144	24366473	CF, 47k ohm
R145	24366152	CF, 1500 ohm
R146	24366473	CF, 47k ohm
R147	24366103	CF, 10k ohm
R148	24552221	OMF, 220 ohm, 1/2W
R149	24366103	CF, 10k ohm
R151	24066927	VR, 5k ohm, 1/10W
R152	24066925	VR, 20k ohm, 1/10W
R153	24066920	VR, 1M ohm, 1/10W
R160	24366473	CF, 47k ohm
R161	24366102	CF, 1k ohm
R162	24366822	CF, 8200 ohm
R163	24366332	CF, 3300 ohm
R164	24366112	CF, 1100 ohm
R165	24366182	CF, 1800 ohm
R166	24366562	CF, 5600 ohm
R167	24366101	CF, 100 ohm
R168	24366222	CF, 2200 ohm
R169	24366471	CF, 470 ohm
R170	24366112	CF, 1100 ohm
R171	24366470	CF, 47 ohm
R172	24366472	CF, 4700 ohm
R173	24366271	CF, 270 ohm
R174	24366334	CF, 330k ohm
R175	24366101	CF, 100 ohm
R176	24366331	CF, 330 ohm
R177	24366154	CF, 150k ohm
R178	24366820	CF, 82 ohm
R179	24366223	CF, 22k ohm
R180	24366153	CF, 15k ohm
R181	24366131	CF, 130 ohm
R182	24366271	CF, 270 ohm
R183	24366271	CF, 270 ohm
R184	24366105	CF, 1M ohm
R185	24366473	CF, 47k ohm
R186	24366103	CF, 10k ohm
R187	24366152	CF, 1500 ohm
R188	24366472	CF, 4700 ohm
R189	24366472	CF, 4700 ohm
R190	24366103	CF, 10k ohm
R191	24366331	CF, 330 ohm
R192	24366101	CF, 100 ohm
R193	24552101	OMF, 100 ohm, 1/2W
R194	24366473	CF, 47k ohm
R195	24366103	CF, 10k ohm
R196	24366103	CF, 10k ohm
R197	24366473	CF, 47k ohm
R198	24366332	CF, 3300 ohm
R199	24366152	CF, 1500 ohm
R201	24366473	CF, 47k ohm
R204	24366102	CF, 1k ohm
R205	24366102	CF, 1k ohm
R206	24366471	CF, 470 ohm
R207	24366473	CF, 47k ohm
R208	24366101	CF, 100 ohm
R209	24366103	CF, 10k ohm
R210	24366203	CF, 20k ohm
R211	24366622	CF, 6200 ohm
R212	24366103	CF, 10k ohm

Location No.	Part No.	Description
R213	24366101	CF, 100 ohm
R214	24366222	CF, 2200 ohm
R215	24366222	CF, 2200 ohm
R216	24366133	CF, 13k ohm
R217	24366101	CF, 100 ohm
R218	24366222	CF, 2200 ohm
R219	24366472	CF, 4700 ohm
R220	24366103	CF, 10k ohm
R221	24366103	CF, 10k ohm
R223	24366103	CF, 10k ohm
R224	24366331	CF, 330 ohm
R226	24366222	CF, 2200 ohm
R227	24366102	CF, 1k ohm
R228	24366222	CF, 2200 ohm
R229	24366152	CF, 1500 ohm
R230	24366101	CF, 100 ohm
~~R240~~	~~24366153~~	~~CF, 15k ohm~~
R241	24366562	CF, 5600 ohm
R252	24061592	VR, 1k ohm, 1/8W
R253	24061592	VR, 1k ohm, 1/8W
R255	24061795	VR, 10k ohm, 1/8W
R256	24066926	VR, 10k ohm, 1/10W
R257	24066926	VR, 10k ohm, 1/10W
R260	24366103	CF, 10k ohm
R261	24366682	CF, 6800 ohm
R263	24366394	CF, 390k ohm
R265	24366332	CF, 3300 ohm
R266	24366102	CF, 1k ohm
R267	24366103	CF, 10k ohm
R268	24366104	CF, 100k ohm
R269	24366103	CF, 10k ohm
R270	24366102	CF, 1k ohm
R271	24366103	CF, 10k ohm
R272	24366332	CF, 3300 ohm
R273	24366223	CF, 22k ohm
R276	24366562	CF, 5600 ohm
R301	24366301	CF, 300 ohm
R302	24366244	CF, 240k ohm
R303	24366473	CF, 47k ohm
R304	24366102	CF, 1k ohm
R305	24366161	CF, 160 ohm
R306	24366203	CF, 20k ohm
R307	24366101	CF, 100 ohm
R308	24366561	CF, 560 ohm
R311	24552242	OMF, 2400 ohm, 1/2W
R312	24366153	CF, 15k ohm
R313	24366624	CF, 620k ohm
R318	24366102	CF, 1k ohm
R320	24366471	CF, 470 ohm
R322	24552472	OMF, 4700 ohm, 1/2W
R323	24323828	OMF, 0.82 ohm, 2W
R325	24366163	CF, 16k ohm
R327	24983629	MF, 6.2 ohm, 1W
R328	24552111	OMF, 110 ohm, 1/2W
R329	24366123	CF, 12k ohm
R330	24366103	CF, 10k ohm
R331	24366333	CF, 33k ohm
R331	24553751	OMF, 750 ohm, 1W
R332	24553122	OMF, 1200 ohm, 1W
R332	24366624	CF, 620k ohm
R333	24366433	CF, 43k ohm
R334	24553752	OMF, 7500 ohm, 1W
R335	24366823	CF, 82k ohm
R351	24061793	VR, 50k ohm, 1/8W

Location No.	Part No.	Description
R356	24061794	VR, 20k ohm, 1/8W
R358	24061797	VR, 2k ohm, 1/8W
R359	24061791	VR, 200k ohm, 1/8W
R361	24366333	CF, 33k ohm
R362	24366333	CF, 33k ohm
R363	24366123	CF, 12k ohm
R364	24366393	CF, 39k ohm
R367	24366183	CF, 18k ohm
R368	24366102	CF, 1k ohm
R370	24366123	CF, 12k ohm
R371	24366103	CF, 10k ohm
R372	24366333	CF, 33k ohm
R373	24366103	CF, 10k ohm
R374	24366472	CF, 4700 ohm
R375	24366273	CF, 27k ohm
R378	24366393	CF, 39k ohm
~~R380~~	~~24366104~~	~~CF, 100k ohm~~
R381	24366561	CF, 560 ohm
R382	24366103	CF, 10k ohm
R383	24941275	CC, 2.7M ohm, 1/4W
R384	24366104	CF, 100k ohm
R385	24366684	CF, 680k ohm
R386	24366105	CF, 1M ohm
R386	24366561	CF, 560 ohm
R387	24366102	CF, 1k ohm
R391	24366104	CF, 100k ohm
R392	24366472	CF, 4700 ohm
R393	24366104	CF, 100k ohm
R394	24360302	CF, 3k ohm, 1/8W
R399	24366682	CF, 6800 ohm
R401	24366472	CF, 4700 ohm
R402	24366273	CF, 27k ohm
R403	24366302	CF, 3k ohm
R405	24366511	CF, 510 ohm
R406	24366471	CF, 470 ohm
R407	24366241	CF, 240 ohm
R408	24366562	CF, 5600 ohm
R409	24366103	CF, 10k ohm
R410	24552432	OMF, 4300 ohm, 1/2W
R411	24366301	CF, 300 ohm
R412	24366241	CF, 240 ohm
R417	24007631	Cement, 3600 ohm, 7W
R418	24553682	OMF, 6800 ohm, 1W
R420	24366104	CF, 100k ohm
R440	24366103	CF, 10k ohm
R441	24366103	CF, 10k ohm
R443	24322109	OMF, 1 ohm, 1W
R444	24994828	MF, 0.82 ohm, ±10%, 2W
R448	24559229	FR, 2.2 ohm, ±10%, 3W
R451	24066925	VR, 20k ohm, 1/10W
R452	24069547	VR, 5k ohm, 0.08W
R460	24552161	OMF, 160 ohm, 1/2W
R462	24384200	OMF, 20 ohm, 3W
R463	24553102	OMF, 1k ohm, 1W
R464	24366683	CF, 68k ohm
R465	24366433	CF, 43k ohm
R466	24366912	CF, 9100 ohm
R467	24366272	CF, 2700 ohm
R468	24366102	CF, 1k ohm
R470	24322479	OMF, 4.7 ohm, 1W
R471	24533151	FR, 150 ohm, 2W
R502	24366334	CF, 330k ohm
R503	24366202	CF, 2k ohm
R504	24366471	CF, 470 ohm

Location No.	Part No.	Description
R505	24366822	CF, 8200 ohm
R507	24366822	CF, 8200 ohm
R509	24366203	CF, 20k ohm
R510	24366101	CF, 100 ohm
R511	24366562	CF, 5600 ohm
R512	24366152	CF, 1500 ohm
R513	24366152	CF, 1500 ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R518	24945185	CC, 1.8M ohm, ±10%, 1/4W
R519	24366333	CF, 33k ohm
R521	24366102	CF, 1k ohm
R522	24360185	CF, 1.8M ohm, 1/8W
R523	24366562	CF, 5600 ohm
R531	24366221	CF, 220 ohm
R532	24366241	CF, 240 ohm
R533	24366561	CF, 560 ohm
R535	24366301	CF, 300 ohm
R537	24366561	CF, 560 ohm
R538	24366331	CF, 330 ohm
R539	24366561	CF, 560 ohm
R541	24366102	CF, 1k ohm
R542	24366331	CF, 330 ohm
R543	24366103	CF, 10k ohm
R547	24366101	CF, 100 ohm
R548	24366101	CF, 100 ohm
R549	24366101	CF, 100 ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24061591	VR, 2k ohm, 1/8W
R558	24061591	VR, 2k ohm, 1/8W
R559	24061591	VR, 2k ohm, 1/8W
R565	24366560	CF, 56 ohm
R566	24366560	CF, 56 ohm
R567	24366560	CF, 56 ohm
R568	24366102	CF, 1k ohm
R591	24383153	OMF, 15k ohm, 2W
R592	24383153	OMF, 15k ohm, 2W
R593	24383153	OMF, 15k ohm, 2W
R598	24366394	CF, 390k ohm
R602	24366472	CF, 4700 ohm
R619	24366223	CF, 22k ohm
R623	24366102	CF, 1k ohm
R624	24366154	CF, 150k ohm
R625	24366154	CF, 150k ohm
R628	24366472	CF, 4700 ohm
R629	24366184	CF, 180k ohm
R630	24366472	CF, 4700 ohm
R631	24366103	CF, 10k ohm
R632	24366562	CF, 5600 ohm
R633	24366562	CF, 5600 ohm
R634	24366103	CF, 10k ohm
R635	24366472	CF, 4700 ohm
R636	24366103	CF, 10k ohm
R637	24366103	CF, 10k ohm
R638	24366682	CF, 6800 ohm
R640	24366222	CF, 2200 ohm
R641	24366682	CF, 6800 ohm
R643	24366222	CF, 2200 ohm
R644	24366229	CF, 2.2 ohm
R645	24366229	CF, 2.2 ohm
R646	24366473	CF, 47k ohm
R647	24366473	CF, 47k ohm
R665	24381331	OMF, 330 ohm, 1/2W

Location No.	Part No.	Description
R666	24381331	OMF, 330 ohm, 1/2W
R670	24366102	CF, 1k ohm
R671	24366563	CF, 56k ohm
R672	24366563	CF, 56k ohm
R673	24366102	CF, 1k ohm
R674	24366102	CF, 1k ohm
R675	24366102	CF, 1k ohm
R676	24366102	CF, 1k ohm
R677	24366152	CF, 1500 ohm
R678	24552431	OMF, 430 ohm, 1/2W
R679	24366105	CF, 1M ohm
R680	24366223	CF, 22k ohm
R681	24366821	CF, 820 ohm
R682	24366222	CF, 2200 ohm
R692	24366471	CF, 470 ohm
R693	24366103	CF, 10k ohm
R694	24366103	CF, 10k ohm
R695	24366471	CF, 470 ohm
R696	24366473	CF, 47k ohm
R697	24366473	CF, 47k ohm
R801	24942565	CC, 5.6M ohm, 1/2W
R805	24007864	Cement, 3 ohm, 15W
R810	24384823	OMF, 82k ohm, 3W
R812	24321689	OMF, 6.8 ohm, 1/2W
R813	24553471	OMF, 470 ohm, 1W
R814	24321338	OMF, 0.33 ohm, 1/2W
R815	24366683	CF, 68k ohm
R816	24367123	CF, 12k ohm, ±2%
R817	24007952	Cement, 6.8 ohm, 5W
R818	24366331	CF, 330 ohm
R819	24327104	MF, 100k ohm, ±1%, 1/4W
R820	24366100	CF, 10 ohm
R821	24366101	CF, 100 ohm
R822	24322398	OMF, 0.39 ohm, 1W
R823	24007738	Cement, 330 ohm, 10W
R824	24322398	OMF, 0.39 ohm, 1W
R825	24366101	CF, 100 ohm
R826	24366331	CF, 330 ohm
R827	24007589	Cement, 1200 ohm, 5W
R828	24366103	CF, 10k ohm
R829	24383103	OMF, 10k ohm, 2W
R830	24552391	OMF, 390 ohm, 1/2W
R831	24366102	CF, 1k ohm
R832	24321338	OMF, 0.33 ohm, 1/2W
R833	24327134	MF, 130k ohm, ±1%, 1/4W
R834	24327222	MF, 2200 ohm, ±1%, 1/4W
R835	24366823	CF, 82k ohm
R836	24327913	MF, 91k ohm, ±1%, 1/4W
R837	24381100	OMF, 10 ohm, 1/2W
R838	24366103	CF, 10k ohm
R840	24366103	CF, 10k ohm
R841	24381472	OMF, 4700 ohm, 1/2W
R842	24557109	FR, 1 ohm, ±10%, 1W
R843	24366332	CF, 3300 ohm
R844	24366103	CF, 10k ohm
R845	24366332	CF, 3300 ohm
R846	24366151	CF, 150 ohm
R847	24366102	CF, 1k ohm
R848	24366102	CF, 1k ohm
R849	24383153	OMF, 15k ohm, 2W
R851	24066924	VR, 50k ohm, 1/10W
R852	24066925	VR, 20k ohm, 1/10W
R860	24366182	CF, 1800 ohm
R861	24322228	OMF, 0.22 ohm, 1W

Location No.	Part No.	Description
R862	24557109	FR, 1 ohm, ±10%, 1W
R863	24383152	OMF, 1500 ohm, 2W
R864	24383102	OMF, 1k ohm, 2W
R865	24366222	CF, 2200 ohm
R866	24366101	CF, 100 ohm
R867	24366392	CF, 3900 ohm
R868	24366103	CF, 10k ohm
R869	24366102	CF, 1k ohm
R870	24366102	CF, 1k ohm
R871	24366222	CF, 2200 ohm
R872	24366103	CF, 10k ohm
R880	24366102	CF, 1k ohm
⚠ R890	24000875	PTC Thermistor, 18 ohm, ±20%, 290V
R901	24946272	CC, 2700 ohm, ±10%, 1/2W
R902	24946272	CC, 2700 ohm, ±10%, 1/2W
~~R903~~	~~24946272~~	~~CC, 2700 ohm, ±10%, 1/2W~~
R920	24000874	FR, 4.3 ohm, 1W
RA02	24366472	CF, 4700 ohm
RA03	24366472	CF, 4700 ohm
RA06	24366473	CF, 47k ohm
RA09	24366223	CF, 22k ohm
RA10	24366123	CF, 12k ohm
RA11	24366102	CF, 1k ohm
RA12	24366102	CF, 1k ohm
RA13	24366472	CF, 4700 ohm
RA14	24366471	CF, 470 ohm
RA15	24366471	CF, 470 ohm
RA16	24366471	CF, 470 ohm
RA17	24366102	CF, 1k ohm
RA18	24366102	CF, 1k ohm
RA19	24366102	CF, 1k ohm
RA20	24366103	CF, 10k ohm
RA21	24366103	CF, 10k ohm
RA22	24366102	CF, 1k ohm
RA23	24366102	CF, 1k ohm
RA24	24366102	CF, 1k ohm
RA25	24366102	CF, 1k ohm
RA26	24366102	CF, 1k ohm
RA27	24366102	CF, 1k ohm
RA28	24366102	CF, 1k ohm
RA29(U902)	24366102	CF, 1k ohm
RA29(U906)	24360122	CF, 1200 ohm, 1/8W
RA30(U902)	24366102	CF, 1k ohm
RA30(U906)	24360122	CF, 1200 ohm, 1/8W
RA31	24366103	CF, 10k ohm
RA32	24366473	CF, 47k ohm
RA33	24366473	CF, 47k ohm
RA34	24366152	CF, 1500 ohm
RA35	24366103	CF, 10k ohm
RA36	24366392	CF, 3900 ohm
RA37	24366103	CF, 10k ohm
RA38	24366102	CF, 1k ohm
RA39	24366102	CF, 1k ohm
RA40	24366102	CF, 1k ohm
RA41	24366103	CF, 10k ohm
RA42	24366102	CF, 1k ohm
RA43	24366102	CF, 1k ohm
RA44	24366472	CF, 4700 ohm
RA45	24366102	CF, 1k ohm
RA46	24366102	CF, 1k ohm
RA47	24366102	CF, 1k ohm
RA48	24366102	CF, 1k ohm
RA49	24366102	CF, 1k ohm

Location No.	Part No.	Description
RA50	24366102	CF, 1k ohm
RA51	24366102	CF, 1k ohm
RA52	24366102	CF, 1k ohm
RA53	24366102	CF, 1k ohm
RA54	24366223	CF, 22k ohm
RA55	24366333	CF, 33k ohm
RA56	24366333	CF, 33k ohm
RA57	24366333	CF, 33k ohm
RA58	24366221	CF, 220 ohm
RA60	24366333	CF, 33k ohm
RA61	24366392	CF, 3900 ohm
RA62	24366333	CF, 33k ohm
RA63	24366563	CF, 56k ohm
RA64	24366105	CF, 1M ohm
RA65	24366103	CF, 10k ohm
RA66	24366103	CF, 10k ohm
~~RA67~~	~~24366102~~	~~CF, 1k ohm~~
RA68	24366102	CF, 1k ohm
RA69	24366102	CF, 1k ohm
RA70	24366102	CF, 1k ohm
RA71	24366102	CF, 1k ohm
RA72	24366102	CF, 1k ohm
RA73	24366561	CF, 560 ohm
RA74	24366102	CF, 1k ohm
RA75	24366102	CF, 1k ohm
RA76	24366564	CF, 560k ohm
RA77	24366102	CF, 1k ohm
RA78	24366102	CF, 1k ohm
RA79	24366563	CF, 56k ohm
RA81	24366102	CF, 1k ohm
RA83	24360431	CF, 430 ohm, 1/8W
RA84	24366102	CF, 1k ohm
RA85	24366123	CF, 12k ohm
RA86	24366561	CF, 560 ohm
RA87	24366564	CF, 560k ohm
RA89	24366563	CF, 56k ohm
RA90	24366103	CF, 10k ohm
RA91	24366392	CF, 3900 ohm
RA92	24366103	CF, 10k ohm
RA93	24366473	CF, 47k ohm
RA94	24366152	CF, 1500 ohm
RA95	24366103	CF, 10k ohm
RA96	24366102	CF, 1k ohm
RA97	24366102	CF, 1k ohm
RA98	24366101	CF, 100 ohm
RA99	24366103	CF, 10k ohm
RB01	24366103	CF, 10k ohm
RB02	24366332	CF, 3300 ohm
RB04	24366103	CF, 10k ohm
RB05	24366332	CF, 3300 ohm
RB06	24366473	CF, 47k ohm
RB07	24366102	CF, 1k ohm
RB08	24366102	CF, 1k ohm
RB09	24366223	CF, 22k ohm
RB15	24366153	CF, 15k ohm
RB17	24366102	CF, 1k ohm
RB18	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB19	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB20	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB21	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB25	24366103	CF, 10k ohm
RB32	24366914	CF, 910k ohm
RG01	24366103	CF, 10k ohm
RG02	24366104	CF, 100k ohm

Location No.	Part No.	Description
RG03	24366104	CF, 100k ohm
RG04	24366103	CF, 10k ohm
RG05	24366223	CF, 22k ohm
RG06	24366103	CF, 10k ohm
RG07	24366103	CF, 10k ohm
RG08	24366272	CF, 2700 ohm
RG09	24366224	CF, 220k ohm
RG10	24366473	CF, 47k ohm
RG11	24366562	CF, 5600 ohm
RG12	24366473	CF, 47k ohm
RG13	24366221	CF, 220 ohm
RG14	24366101	CF, 100 ohm
RG15	24366102	CF, 1k ohm
RG16	24366104	CF, 100k ohm
RG17	24366104	CF, 100k ohm
RG18	24366101	CF, 100 ohm
~~RG19~~	~~24366822~~	~~CF, 8200 ohm~~
RG20	24366103	CF, 10k ohm
RG21	24366332	CF, 3300 ohm
RG22	24366303	CF, 30k ohm
RG23	24366332	CF, 3300 ohm
RG24	24366103	CF, 10k ohm
RG25	24366103	CF, 10k ohm
RG26	24366103	CF, 10k ohm
RG27	24366103	CF, 10k ohm
RG28	24366103	CF, 10k ohm
RG31	24366473	CF, 47k ohm
RG32	24366473	CF, 47k ohm
RG34	24366473	CF, 47k ohm
RG35	24366102	CF, 1k ohm
RG50	24061795	VR, 10k ohm, 1/8W
RH01	24366152	CF, 1500 ohm
RH02	24366122	CF, 1200 ohm
RH03	24366152	CF, 1500 ohm
RH04	24366511	CF, 510 ohm
RH05	24366621	CF, 620 ohm
RH06	24366152	CF, 1500 ohm
RH16	24366472	CF, 4700 ohm
RH18	24366102	CF, 1k ohm
RH19	24366103	CF, 10k ohm
RH23	24366103	CF, 10k ohm
RH24	24366222	CF, 2200 ohm
RH25	24366101	CF, 100 ohm
RH26	24366101	CF, 100 ohm
RH27	24366101	CF, 100 ohm
RH29	24366332	CF, 3300 ohm
RH30	24366222	CF, 2200 ohm
RH32	24366223	CF, 22k ohm
RH34	24366272	CF, 2700 ohm
RH38	24366272	CF, 2700 ohm
RH39	24366272	CF, 2700 ohm
RH40	24366272	CF, 2700 ohm
RH64	24366222	CF, 2200 ohm
RH65	24366473	CF, 47k ohm
RH72	24366103	CF, 10k ohm
RH73	24366103	CF, 10k ohm
RH74	24366102	CF, 1k ohm
RH75	24366102	CF, 1k ohm
RH76	24366102	CF, 1k ohm
RH77	24366103	CF, 10k ohm
RH78	24366102	CF, 1k ohm
RH79	24366392	CF, 3900 ohm
RH80	24366103	CF, 10k ohm
RH81	24366272	CF, 2700 ohm

Location No.	Part No.	Description
RH90	24366103	CF, 10k ohm
RH91	24366103	CF, 10k ohm
RH92	24366332	CF, 3300 ohm
RH95	24366103	CF, 10k ohm
RH96	24366101	CF, 100 ohm
RH97	24366682	CF, 6800 ohm
RK01	24366221	CF, 220 ohm
RK03	24366131	CF, 130 ohm
RK04	24366221	CF, 220 ohm
RK05	24366103	CF, 10k ohm
RK06	24366103	CF, 10k ohm
RK07	24366103	CF, 10k ohm
RK08	24552221	OMF, 220 ohm, 1/2W
RK09	24366103	CF, 10k ohm
RK10	24366473	CF, 47k ohm
RK11	24366102	CF, 1k ohm
~~RK12~~	~~24366822~~	~~CF, 8200 ohm~~
RK13	24366562	CF, 5600 ohm
RK14	24366821	CF, 820 ohm
RK15	24366112	CF, 1100 ohm
RK16	24366332	CF, 3300 ohm
RK17	24366101	CF, 100 ohm
RK18	24366222	CF, 2200 ohm
RK19	24366471	CF, 470 ohm
RK20	24366112	CF, 1100 ohm
RK21	24366470	CF, 47 ohm
RK22	24366472	CF, 4700 ohm
RK23	24366334	CF, 330k ohm
RK24	24366101	CF, 100 ohm
RK25	24366331	CF, 330 ohm
RK26	24366154	CF, 150k ohm
RK27	24366334	CF, 330k ohm
RK28	24366820	CF, 82 ohm
RK29	24366271	CF, 270 ohm
RK30	24366102	CF, 1k ohm
RK31	24366223	CF, 22k ohm
RK32	24366104	CF, 100k ohm
RK33	24366332	CF, 3300 ohm
RK34	24366153	CF, 15k ohm
RK35	24366222	CF, 2200 ohm
RK36	24366124	CF, 120k ohm
RK37	24366684	CF, 680k ohm
RK38	24366513	CF, 51k ohm
RK39	24366753	CF, 75k ohm
RK40	24366222	CF, 2200 ohm
RK42	24366471	CF, 470 ohm
RK43	24552101	OMF, 100 ohm, 1/2W
RK44	24366562	CF, 5600 ohm
RK45	24366390	CF, 39 ohm
RK46	24366102	CF, 1k ohm
RK47	24366680	CF, 68 ohm
RK50	24066927	VR, 5k ohm, 1/10W
RK51	24066925	VR, 20k ohm, 1/10W
RK52	24060618	VR, 100k ohm, 0.3W
RK61	24366332	CF, 3300 ohm
RK62	24366223	CF, 22k ohm
RK63	24366682	CF, 6800 ohm
RK64	24366271	CF, 270 ohm
RK65	24366331	CF, 330 ohm
RK66	24366331	CF, 330 ohm
RK67	24366101	CF, 100 ohm
RK68	24552101	OMF, 100 ohm, 1/2W
RK69	24366105	CF, 1M ohm
RK70	24366473	CF, 47k ohm

Location No.	Part No.	Description
RK71	24366103	CF, 10k ohm
RK72	24366103	CF, 10k ohm
RK73	24366103	CF, 10k ohm
RK74	24366102	CF, 1k ohm
RK76	24366102	CF, 1k ohm
RK77	24366102	CF, 1k ohm
RK78	24366101	CF, 100 ohm
RK79	24366681	CF, 680 ohm
RK80	24366562	CF, 5600 ohm
RK81	24366101	CF, 100 ohm
RK82	24366102	CF, 1k ohm
RK83	24366222	CF, 2200 ohm
RK84	24366473	CF, 47k ohm
RK86	24360152	CF, 1500 ohm, 1/8W
RK87	24360152	CF, 1500 ohm, 1/8W
RK89	24360562	CF, 5600 ohm, 1/8W
RK90	24366222	CF, 2200 ohm
RK91	24366222	CF, 2200 ohm
RK92	24366102	CF, 1k ohm
RM03	24366182	CF, 1800 ohm
RM04	24366242	CF, 2400 ohm
RM05	24366471	CF, 470 ohm
RM06	24945185	CC, 1.8M ohm, ±10%, 1/4W
RM16	24366333	CF, 33k ohm
RM20	24366221	CF, 220 ohm
RN12	24366272	CF, 2700 ohm
RN13	24366103	CF, 10k ohm
RN14	24366103	CF, 10k ohm
RN15	24366223	CF, 22k ohm
RN16	24366103	CF, 10k ohm
RN17	24366471	CF, 470 ohm
RN19	24366222	CF, 2200 ohm
RN21	24366332	CF, 3300 ohm
RN24	24366103	CF, 10k ohm
RN25	24366334	CF, 330k ohm
RN28	24366514	CF, 510k ohm
RN31	24366103	CF, 10k ohm
RN32	24366103	CF, 10k ohm
RN33	24366473	CF, 47k ohm
RN34	24366103	CF, 10k ohm
RN35	24366223	CF, 22k ohm
RP01	24366104	CF, 100k ohm
RP02	24366154	CF, 150k ohm
RP03	24366471	CF, 470 ohm
RP07	24366103	CF, 10k ohm
RP08	24366103	CF, 10k ohm
RP09	24366103	CF, 10k ohm
RP10	24366104	CF, 100k ohm
RP14	24366103	CF, 10k ohm
RP15	24366103	CF, 10k ohm
RP16	24366103	CF, 10k ohm
RP17	24366471	CF, 470 ohm
RP18	24366154	CF, 150k ohm
RP19	24366621	CF, 620 ohm
RP20	24366102	CF, 1k ohm
RP24	24366332	CF, 3300 ohm
RP25	24366621	CF, 620 ohm
RP26	24366332	CF, 3300 ohm
RP27	24366102	CF, 1k ohm
RP28	24366101	CF, 100 ohm
RP29	24366332	CF, 3300 ohm
RP30	24366561	CF, 560 ohm
RP31	24366681	CF, 680 ohm
RP32	24366102	CF, 1k ohm

Location No.	Part No.	Description
RP33	24366822	CF, 8200 ohm
RP34	24366331	CF, 330 ohm
RP35	24552221	OMF, 220 ohm, 1/2W
RP36	24366511	CF, 510 ohm
RP37	24366302	CF, 3k ohm
RP38	24366273	CF, 27k ohm
RP39	24366153	CF, 15k ohm
RP40	24366822	CF, 8200 ohm
RP41	24366272	CF, 2700 ohm
RP42	24366103	CF, 10k ohm
RP43	24366244	CF, 240k ohm
RP44	24366301	CF, 300 ohm
RP45	24366161	CF, 160 ohm
RP46	24366562	CF, 5600 ohm
RP47	24366102	CF, 1k ohm
RP48	24945185	CC, 1.8M ohm, ±10%, 1/4W
RP49	24366152	CF, 1500 ohm
RP50	24063750	VR, 10k ohm, 0.08W
RP51	24063750	VR, 10k ohm, 0.08W
RP52	24063750	VR, 10k ohm, 0.08W
RP53	24063750	VR, 10k ohm, 0.08W
RP54	24066955	VR, 1k ohm, 1/10W
RP59	24366221	CF, 220 ohm
RP60	24366152	CF, 1500 ohm
RP61	24945125	CC, 1.2M ohm, ±10%, 1/4W
RP62	24945185	CC, 1.8M ohm, ±10%, 1/4W
RP64	24366103	CF, 10k ohm
RP65	24366471	CF, 470 ohm
RP66	24366333	CF, 33k ohm
RP67	24366334	CF, 330k ohm
RP68	24366202	CF, 2k ohm
RP69	24366391	CF, 390 ohm
RP70	24366103	CF, 10k ohm
RP71	24366242	CF, 2400 ohm
RP72	24366101	CF, 100 ohm
RP73	24366182	CF, 1800 ohm
RP74	24366822	CF, 8200 ohm
RP75	24366331	CF, 330 ohm
RP76	24366471	CF, 470 ohm
RP78	24366222	CF, 2200 ohm
RP80	24366332	CF, 3300 ohm
RP81	24366103	CF, 10k ohm
RP85	24366103	CF, 10k ohm
RP86	24366272	CF, 2700 ohm
RP87	24366103	CF, 10k ohm
RP88	24366103	CF, 10k ohm
RP89	24366223	CF, 22k ohm
RP90	24366103	CF, 10k ohm
RP91	24366473	CF, 47k ohm
RP92	24366473	CF, 47k ohm
RP93	24366103	CF, 10k ohm
RP94	24366103	CF, 10k ohm
RP95	24366103	CF, 10k ohm
RP96	24366332	CF, 3300 ohm
RP97	24366224	CF, 220k ohm
RP98	24366223	CF, 22k ohm
RP99	24366101	CF, 100 ohm
RS01	24366103	CF, 10k ohm
RS02	24366223	CF, 22k ohm
RS03	24366223	CF, 22k ohm
RS04	24366223	CF, 22k ohm
RS05	24366472	CF, 4700 ohm
RS06	24366681	CF, 680 ohm
RS07	24366103	CF, 10k ohm

Location No.	Part No.	Description
RS08	24366103	CF, 10k ohm
RS10	24366223	CF, 22k ohm
RS11	24366473	CF, 47k ohm
RS12	24366473	CF, 47k ohm
RS13	24366223	CF, 22k ohm
RS14	24366223	CF, 22k ohm
RS15	24366683	CF, 68k ohm
RS16	24366103	CF, 10k ohm
RS17	24366103	CF, 10k ohm
RS18	24366123	CF, 12k ohm
RS19	24366103	CF, 10k ohm
RS20	24366103	CF, 10k ohm
RS21	24366103	CF, 10k ohm
RS22	24366103	CF, 10k ohm
RS23	24366103	CF, 10k ohm
RS24	24366103	CF, 10k ohm
RS25	24360103	CF, 10k ohm, 1/8W
RS26	24366103	CF, 10k ohm
RS27	24366103	CF, 10k ohm
RS28	24366472	CF, 4700 ohm
RS29	24366473	CF, 47k ohm
RS30	24366122	CF, 1200 ohm
RS31	24366223	CF, 22k ohm
RS32	24366473	CF, 47k ohm
RS33	24366473	CF, 47k ohm
RS34	24366222	CF, 2200 ohm
RS35	24366104	CF, 100k ohm
RS36	24366473	CF, 47k ohm
RS37	24366103	CF, 10k ohm
RS38	24366103	CF, 10k ohm
RS39	24366103	CF, 10k ohm
RS40	24366103	CF, 10k ohm
RS41	24366103	CF, 10k ohm
RS42	24366103	CF, 10k ohm
RS43	24366103	CF, 10k ohm
RS44	24366103	CF, 10k ohm
RS45	24366201	CF, 200 ohm
RS46	24366201	CF, 200 ohm
RS47	24366229	CF, 2.2 ohm
RS48	24366229	CF, 2.2 ohm
RS49	24366102	CF, 1k ohm
RS50	24063750	VR, 10k ohm, 0.08W
RS60	24366102	CF, 1k ohm
RS61	24366473	CF, 47k ohm
RS62	24366473	CF, 47k ohm
RS63	24366473	CF, 47k ohm
RS64	24366223	CF, 22k ohm
RS66	24366102	CF, 1k ohm
RS67	24366271	CF, 270 ohm
RS68	24366271	CF, 270 ohm
RS70	24366103	CF, 10k ohm
RS80	24366102	CF, 1k ohm
RS81	24366123	CF, 12k ohm
RS82	24360621	CF, 620 ohm, 1/8W
RV01	24366102	CF, 1k ohm
RV02	24366821	CF, 820 ohm
RV03	24366101	CF, 100 ohm
RV04	24366821	CF, 820 ohm
RV05	24366102	CF, 1k ohm
RV06	24366101	CF, 100 ohm
RV07	24366101	CF, 100 ohm
RV08	24366101	CF, 100 ohm
RV09	24366103	CF, 10k ohm
RV10	24366101	CF, 100 ohm

Location No.	Part No.	Description
RV11	24366101	CF, 100 ohm
RV12	24366101	CF, 100 ohm
RV13	24366223	CF, 22k ohm
RV14	24366223	CF, 22k ohm
RV15	24366101	CF, 100 ohm
RV16	24366101	CF, 100 ohm
RV17	24366223	CF, 22k ohm
RV18	24366223	CF, 22k ohm
RV20	24366103	CF, 10k ohm
RV21	24366103	CF, 10k ohm
RV22	24366102	CF, 1k ohm
RV24	24366104	CF, 100k ohm
RV25	24366223	CF, 22k ohm
RV27	24366471	CF, 470 ohm
RV29	24366102	CF, 1k ohm
RV30	24366102	CF, 1k ohm
RV31	24366102	CF, 1k ohm
RV32	24366332	CF, 3300 ohm
RV33	24366332	CF, 3300 ohm
RV34	24552750	OMF, 75 ohm, 1/2W
RV35	24366101	CF, 100 ohm
RV36	24366102	CF, 1k ohm
RV37	24366101	CF, 100 ohm
RV38	24366101	CF, 100 ohm
RV39	24366101	CF, 100 ohm
RV40	24366102	CF, 1k ohm
RV41	24366101	CF, 100 ohm
RV42	24366101	CF, 100 ohm
RV43	24366123	CF, 12k ohm
RV44	24366103	CF, 10k ohm
RV45	24366820	CF, 82 ohm
RV46	24366820	CF, 82 ohm
RV47	24366103	CF, 10k ohm
RV48	24366103	CF, 10k ohm
RV49	24366680	CF, 68 ohm
RV50	24366910	CF, 91 ohm
RV53	24366680	CF, 68 ohm
RV54	24366152	CF, 1500 ohm
RV55	24366123	CF, 12k ohm
RV56	24366152	CF, 1500 ohm
RV57	24366910	CF, 91 ohm
RV58	24366103	CF, 10k ohm
RV59	24366750	CF, 75 ohm
RV60	24366220	CF, 22 ohm
RV61	24366510	CF, 51 ohm
RV62	24366510	CF, 51 ohm
RV63	24366220	CF, 22 ohm
RV64	24366220	CF, 22 ohm
RV65	24366510	CF, 51 ohm
RV66	24366223	CF, 22k ohm
RV67	24366223	CF, 22k ohm
RV68	24366471	CF, 470 ohm
RV69	24366471	CF, 470 ohm
RV70	24366104	CF, 100k ohm
RV71	24366104	CF, 100k ohm
RV72	24366104	CF, 100k ohm
RV73	24366104	CF, 100k ohm
RV74	24366104	CF, 100k ohm
RV75	24366104	CF, 100k ohm
RV76	24366102	CF, 1k ohm
RV77	24366102	CF, 1k ohm
RV78	24366102	CF, 1k ohm
RV79	24366102	CF, 1k ohm
RV80	24366102	CF, 1k ohm

Location No.	Part No.	Description
RV87	24366103	CF, 10k ohm
RV97	24366102	CF, 1k ohm
RW02	24366101	CF, 100 ohm
RW03	24552750	OMF, 75 ohm, 1/2W
RW06	24366391	CF, 390 ohm
RW08	24366101	CF, 100 ohm
RW09	24366104	CF, 100k ohm
RW10	24366104	CF, 100k ohm
RW11	24366821	CF, 820 ohm
RW12	24366102	CF, 1k ohm
RW13	24366821	CF, 820 ohm
RW14	24366102	CF, 1k ohm
RW15	24366472	CF, 4700 ohm
RX02	24366102	CF, 1k ohm
RX05	24366101	CF, 100 ohm
RX08	24366101	CF, 100 ohm
RX10	24366101	CF, 100 ohm
RX13	24366102	CF, 1k ohm
RX29	24366102	CF, 1k ohm
RX33	24366332	CF, 3300 ohm
RX60	24366512	CF, 5100 ohm
RX61	24366102	CF, 1k ohm
RX62	24366112	CF, 1100 ohm
RX63	24366512	CF, 5100 ohm
RX64	24366102	CF, 1k ohm
RX65	24366102	CF, 1k ohm
RX66	24366102	CF, 1k ohm
RX67	24552750	OMF, 75 ohm, 1/2W
RX69	24366112	CF, 1100 ohm
RX70	24366202	CF, 2k ohm
RX71	24366202	CF, 2k ohm
RX72	24366202	CF, 2k ohm
RX74	24366473	CF, 47k ohm
RX76	24366103	CF, 10k ohm
RX77	24366203	CF, 20k ohm
RX78	24366393	CF, 39k ohm
RX79	24366681	CF, 680 ohm
RX80	24366821	CF, 820 ohm
RX81	24366471	CF, 470 ohm
RX82	24366821	CF, 820 ohm
RX83	24366332	CF, 3300 ohm
RX84	24366103	CF, 10k ohm
RX85	24366391	CF, 390 ohm
RX86	24366222	CF, 2200 ohm
RX89	24366682	CF, 6800 ohm
RX90	24366102	CF, 1k ohm
RX91	24366102	CF, 1k ohm
RX92	24366102	CF, 1k ohm
RX93	24366102	CF, 1k ohm
RX94	24366472	CF, 4700 ohm
RX95	24366472	CF, 4700 ohm
RX96	24366472	CF, 4700 ohm
RY01	24366102	CF, 1k ohm
RY02	24366681	CF, 680 ohm
RY03	24366681	CF, 680 ohm
RY04	24366102	CF, 1k ohm
RY05	24366101	CF, 100 ohm
RY06	24366101	CF, 100 ohm
RY07	24367122	CF, 1200 ohm, ±2%
RY08	24366222	CF, 2200 ohm
RY09	24366152	CF, 1500 ohm
RY10	24366223	CF, 22k ohm
RY11	24366202	CF, 2k ohm
RY12	24366302	CF, 3k ohm

Location No.	Part No.	Description
RY13	24366512	CF, 5100 ohm
RY14	24366912	CF, 9100 ohm
RY15	24366242	CF, 2400 ohm
RY16	24366561	CF, 560 ohm
RY17	24366561	CF, 560 ohm
RY18	24366182	CF, 1800 ohm
RY20	24366273	CF, 27k ohm
RY22	24366153	CF, 15k ohm
RY32	24366182	CF, 1800 ohm
RY33	24366362	CF, 3600 ohm
RY34	24366112	CF, 1100 ohm
RY35	24366182	CF, 1800 ohm
RY36	24366183	CF, 18k ohm
RY37	24366431	CF, 430 ohm
RY38	24366223	CF, 22k ohm
RY45	24366472	CF, 4700 ohm
RY48	24366472	CF, 4700 ohm
RY49	24366132	CF, 1300 ohm
RZ30	24366103	CF, 10k ohm
RZ31	24366103	CF, 10k ohm
RZ32	24366473	CF, 47k ohm
RZ33	24366472	CF, 4700 ohm
RZ34	24366103	CF, 10k ohm
RZ35	24366104	CF, 100k ohm
RZ36	24366103	CF, 10k ohm
RZ37	24366472	CF, 4700 ohm
RZ38	24366473	CF, 47k ohm
RZ39	24366472	CF, 4700 ohm
RZ40	24366153	CF, 15k ohm
RZ41	24366103	CF, 10k ohm
RZ42	24366103	CF, 10k ohm
RZ43	24366102	CF, 1k ohm
RZ44	24366102	CF, 1k ohm
RZ45	24366102	CF, 1k ohm
RZ46	24366102	CF, 1k ohm
RZ47	24366102	CF, 1k ohm
RZ48	24366102	CF, 1k ohm
RZ49	24366473	CF, 47k ohm
RZ51	24061776	VR, 200 ohm, 0.3W
RZ52	24061776	VR, 200 ohm, 0.3W
RZ53	24366223	CF, 22k ohm
RZ54	24366104	CF, 100k ohm
RZ55	24366223	CF, 22k ohm
RZ56	24366473	CF, 47k ohm
RZ57	24366101	CF, 100 ohm
RZ58	24366222	CF, 2200 ohm
RZ59	24366222	CF, 2200 ohm
RZ60	24366222	CF, 2200 ohm
RZ61	24366392	CF, 3900 ohm

COILS & TRANSFORMERS

Location No.	Part No.	Description
L101	23238714	Coil, Peaking, TRF4100AJ
L102	23262855	Coil, PIF, TRF1453
L103	23262845	Coil, PIF, TRF1056
L104	23201003	Coil, Choke, TRF9202A
L105	23261985	Coil, RF Choke, TRF9221
L106	23238922	Coil, Peaking, TRF4100AC
L107	23262668	Coil, IF, TRF1162T
L108	23238714	Coil, Peaking, TRF4100AJ
L109	23238922	Coil, Peaking, TRF4100AC
L110	23238923	Coil, Peaking, TRF4829AC
L112	23262663	Coil, IF, TRF1157T
L113	23262813	Coil, IF, TRF1077D

Location No.	Part No.	Description
L311	23261974	Coil, Choke, HC5-035
L401	23238918	Coil, Peaking, TRF4220AC
L411	23103859	Coil (Ferrite Bead), TEM2011
L412	23103859	Coil (Ferrite Bead), TEM2011
L413	23233069	Coil, Linearity, TLN2121
L461	23221785	Coil, Choke, TLN3161
⚠ L462	23227264	Deflection Yoke, TDY-6341A
L463	23221936	Coil, Choke, TLN3041
L464	23221896	Coil, Choke, TLN3061
L465	23221968	Coil, Choke, TLN3010
L503	23238922	Coil, Peaking, TRF4100AC
L504	23238921	Coil, Peaking, TRF4120AC
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L590	23237973	Coil, Peaking, TRF4151AC
L591	23237973	Coil, Peaking, TRF4151AC
L592	23237973	Coil, Peaking, TRF4151AC
L593	70131039	Coil, Signal Line, ZBF503D-00
L670	23238921	Coil, Peaking, TRF4120AC
L671	23232946	Coil, Variable, TRF3073D
L802	23221076	Coil, Choke, TLN1015R
L803	23261975	Coil, Choke, TRF9229
L804	23261975	Coil, Choke, TRF9229
L805	23222694	Coil, Width, TLN2026
L806	23103859	Coil (Ferrite Bead), TEM2011
L807	23103859	Coil (Ferrite Bead), TEM2011
L808	23222694	Coil, Width, TLN2026
L809	23222694	Coil, Width, TLN2026
L811	23103859	Coil (Ferrite Bead), TEM2011
L812	23238922	Coil, Peaking, TRF4100AC
L813	23103859	Coil (Ferrite Bead), TEM2011
L814	23103859	Coil (Ferrite Bead), TEM2011
L815	23238916	Coil, Peaking, TRF4330AC
L816	23222694	Coil, Width, TLN2026
⚠ L901	23200635	Coil, Degaussing, TSB-2306AK
LA01	23237999	Coil, Peaking, TRF4109AC
LA02	23262778	Coil, IF, TRF1112
LA03	23221937	Coil, Choke, TLN3040
LG01	23262808	Coil, IF, TRF1082
LK01	23262668	Coil, IF, TRF1162T
LK02	23238714	Coil, Peaking, TRF4100AJ
LK04	23262813	Coil, IF, TRF1077D
LK05	23262819	Coil, PIF, TRF1071D
LK06	23238921	Coil, Peaking, TRF4120AC
LK07	23261985	Coil, RF Choke, TRF9221
LK08	23238714	Coil, Peaking, TRF4100AJ
LK09	23238922	Coil, Peaking, TRF4100AC
LK10	23238923	Coil, Peaking, TRF4829AC
LK11	23238924	Coil, Peaking, TRF4689AC
LK13	23232942	Coil, Variable, TRF3077
LK14	23262854	Coil, PIF, TRF1227
LK15	23291999	Coil, Choke, TRF9210
LM01	23262797	Coil, IF, TRF1093D
LM02	23272988	Coil, Chroma Demod, TRF5414
LM03	23272988	Coil, Chroma Demod, TRF5414
LM04	23262798	Coil, IF, TRF1092D
LN02	23238920	Coil, Peaking, TRF4150AC
LP01	23238930	Coil, Peaking, TRF4229AC
LP02	23238768	Coil, Peaking, TRF4681AC
LP03	23238768	Coil, Peaking, TRF4681AC
LP06	23238506	Coil, Peaking, TRF4229AJ
LP07	23238934	Coil, Peaking, TRF4109AC
LP08	23262798	Coil, IF, TRF1092D
LP09	23262797	Coil, IF, TRF1093D
LP10	23238922	Coil, Peaking, TRF4100AC
LP11	23250972	Coil, 1H-Delay Matching, TRF5418D
LP12	23250865	Coil, IF, TRF5414DA
LP13	23250865	Coil, IF, TRF5414DA
LP14	23238934	Coil, Peaking, TRF4109AC
LP17	23238920	Coil, Peaking, TRF4150AC
LP19	23238930	Coil, Peaking, TRF4229AC
LV01	23237988	Coil, Peaking, TRF4829AC
LX60	23237915	Coil, Peaking, TRF4131AC
LX61	23237915	Coil, Peaking, TRF4131AC
LY03	23237983	Coil, Peaking, TRF4220AC
LY04	23237979	Coil, Peaking, TRF4470AC
LY05	23238711	Coil, Peaking, TRF4180AJ
⚠ T401	23224915	Transformer, Horiz. Drive, TLN1068
⚠ T461	23236235	Transformer, Flyback, TFB4087BD
T801	23211891	Line Filter, TRF3164
T802	23211934	Line Filter, TRF3133
⚠ T803	23213496	Transformer, Converter, TPW3148
⚠ T804	23224917	Transformer, Separation, TLN2122
SEMICONDUCTORS		
IC1	23318420	IC, M50541FP
IC2	70119968	IC, M5M4C500L
IC3	23318421	IC, M52686FP
IC4	23318422	IC, M52679FP
IC5	23318422	IC, M52679FP
IC6	23318422	IC, M52679FP
IC101	23318437	IC, μPC1820CA
IC201	23318410	IC, M51494L
IC260	23318244	IC, CX20125
IC303	23119142	IC, AN5521
IC361	23318052	IC, TDA8145
IC405	23318218	IC, μPC7812H
IC501	B0379435	IC, TA8653N
IC604	B0356190	IC, TA7630P
IC605	23318413	IC, LA4282
IC670	B0383400	IC, TA8710S
IC803	23318411	IC, TEA2164
IC806	23318299	IC, L78MR05-FA
IC807	23318412	IC, TEA5170
ICA01	23318448	IC, M37100M8-584
ICA02	23318397	IC, M6M80021P
ICA03	23119182	IC, μPD6336C
ICA30	23119441	IC, LA7910
ICG01	23119092	IC, TDA6600-2
ICG02	B0470522	IC, TC4052BP
ICG03	B0349250	IC, TA75393S
ICH01	23119139	IC, AN5862K
ICH03	23119139	IC, AN5862K
ICK05	23318437	IC, μPC1820CA
ICK15	23318390	IC, TDA4480-2
ICP01	23318419	IC, M52684AP
ICP03	B0470942	IC, TC4094BP
ICP04	23318419	IC, M52684AP
ICP10	B0379435	IC, TA8653N

Location No.	Part No.	Description
ICP17	B0475382	IC, TC4538BP
ICS01	B0350000	IC, TA75458P
ICS04	B0350000	IC, TA75458P
ICS05	B0350000	IC, TA75458P
ICS09	B0350000	IC, TA75458P
ICS10	23119228	IC, μPC1406HA
ICS11	23318195	IC, AN7171NK
ICV07	B0383505	IC, TA8720AN
ICV09	B0325390	IC, TA7347P
ICV10	23318438	IC, M52055P
ICW01	B0383505	IC, TA8720AN
ICX60	23318418	IC, AN5612
ICY01	23318055	IC, TDA4565
Q102	A6317440	Transistor, 2SC1815-Y
Q103	A6317440	Transistor, 2SC1815-Y
Q104	A6317440	Transistor, 2SC1815-Y
~~Q105~~	~~A6708871~~	~~Transistor, 2SC388ATM~~
Q106	A6317440	Transistor, 2SC1815-Y
Q107	A6708871	Transistor, 2SC388ATM
Q108	A6317440	Transistor, 2SC1815-Y
Q109	A6317440	Transistor, 2SC1815-Y
Q110	A6041860	Transistor, 2SK117-GR
Q111	A6317440	Transistor, 2SC1815-Y
Q112	A6319300	Transistor, 2SC1959-Y
Q113	A6317440	Transistor, 2SC1815-Y
Q114	A6317440	Transistor, 2SC1815-Y
Q115	23314229	Transistor, 2SD1378-Q
Q116	A6317440	Transistor, 2SC1815-Y
Q117	A6509140	Transistor, 2SA562TMY
Q118	A6317440	Transistor, 2SC1815-Y
Q202	A6002040	Transistor, RN1204
Q203	A6342200	Transistor, 2SC2878-A
Q204	A6317440	Transistor, 2SC1815-Y
Q205	A6534040	Transistor, 2SA1015-Y
Q261	A6317440	Transistor, 2SC1815-Y
Q262	A6317440	Transistor, 2SC1815-Y
Q263	A6534040	Transistor, 2SA1015-Y
Q301	A6317480	Transistor, 2SC1815-BL
Q303B	23035308	Screw, BTB3X8SZN
Q303C	23030211	Screw, 3X14SN
Q304	A6317440	Transistor, 2SC1815-Y
Q305	A6317440	Transistor, 2SC1815-Y
Q362	A6534040	Transistor, 2SA1015-Y
Q363	A6317440	Transistor, 2SC1815-Y
Q402	A678971D	Transistor, 2SC1569 FA-5
⚠ Q404	A6868767	Transistor, 2SD1428
Q406	A6317440	Transistor, 2SC1815-Y
Q505	A6363200	Transistor, 2SC3619
Q506	A6317440	Transistor, 2SC1815-Y
Q508	A6363200	Transistor, 2SC3619
Q509	A6317440	Transistor, 2SC1815-Y
Q511	A6363200	Transistor, 2SC3619
Q512	A6317440	Transistor, 2SC1815-Y
Q514	A6509120	Transistor, 2SA562TM-O
Q606	A6317440	Transistor, 2SC1815-Y
Q607	A6317440	Transistor, 2SC1815-Y
Q608	A6534040	Transistor, 2SA1015-Y
Q609	A6342200	Transistor, 2SC2878-A
Q610	A6342200	Transistor, 2SC2878-A
Q671	A6317440	Transistor, 2SC1815-Y
Q691	A6342200	Transistor, 2SC2878-A
Q692	A6342200	Transistor, 2SC2878-A
Q804	A6366908	Transistor, 2SC4288A FA-1
Q805	A6533750	Transistor, 2SA1013-O

Location No.	Part No.	Description
Q809	A6317440	Transistor, 2SC1815-Y
Q810	A6328333	Transistor, 2SC2383-Y
Q811	A6534040	Transistor, 2SA1015-Y
Q812	A6842185	Transistor, 2SD553-Y
Q813	A6845743	Transistor, 2SD717-Y
Q814	A6546310	Transistor, 2SA1297Y
Q815	A6317440	Transistor, 2SC1815-Y
Q816	A6867980	Transistor, 2SD1405-V
Q817	A6321240	Transistor, 2SC2120-Y
QA06	A6317440	Transistor, 2SC1815-Y
QA07	A6534040	Transistor, 2SA1015-Y
QA08	A6317440	Transistor, 2SC1815-Y
QA09	A6317440	Transistor, 2SC1815-Y
QA10	A6534040	Transistor, 2SA1015-Y
QA11	A6534040	Transistor, 2SA1015-Y
QA12	A6317440	Transistor, 2SC1815-Y
~~QA13~~	~~A6534040~~	~~Transistor, 2SA1015-Y~~
QA14	A6317440	Transistor, 2SC1815-Y
QA15	A6041860	Transistor, 2SK117-GR
QA16	A6317440	Transistor, 2SC1815-Y
QA19	A6317440	Transistor, 2SC1815-Y
QB01	A6317440	Transistor, 2SC1815-Y
QB02	A6317440	Transistor, 2SC1815-Y
QB04	A6317440	Transistor, 2SC1815-Y
QG04	A6317440	Transistor, 2SC1815-Y
QG05	A6317440	Transistor, 2SC1815-Y
QG06	A6317440	Transistor, 2SC1815-Y
QG07	A6317440	Transistor, 2SC1815-Y
QG08	A6534040	Transistor, 2SA1015-Y
QG09	A6317440	Transistor, 2SC1815-Y
QG10	A6317440	Transistor, 2SC1815-Y
QG12	A6317440	Transistor, 2SC1815-Y
QH04	A6317440	Transistor, 2SC1815-Y
QH06	A6317440	Transistor, 2SC1815-Y
QH09	A6317440	Transistor, 2SC1815-Y
QH10	A6317460	Transistor, 2SC1815-GR
QH11	A6317440	Transistor, 2SC1815-Y
QH13	A6734585	Transistor, 2SC752GTM-O
QH14	A6317440	Transistor, 2SC1815-Y
QH15	A6734585	Transistor, 2SC752GTM-O
QH16	A6534040	Transistor, 2SA1015-Y
QH17	A6734585	Transistor, 2SC752GTM-O
QK01	A6534040	Transistor, 2SA1015-Y
QK02	A6534040	Transistor, 2SA1015-Y
QK03	A6534040	Transistor, 2SA1015-Y
QK04	23314229	Transistor, 2SD1378-Q
QK06	A6317440	Transistor, 2SC1815-Y
QK07	A6509140	Transistor, 2SA562TMY
QK08	A6708871	Transistor, 2SC388ATM
QK09	A6317440	Transistor, 2SC1815-Y
QK10	A6319300	Transistor, 2SC1959-Y
QK11	A6041860	Transistor, 2SK117-GR
QK12	A6317440	Transistor, 2SC1815-Y
QK14	A6708871	Transistor, 2SC388ATM
QK18	A6317440	Transistor, 2SC1815-Y
QN02	A6534040	Transistor, 2SA1015-Y
QN03	A6534040	Transistor, 2SA1015-Y
QN04	A6317440	Transistor, 2SC1815-Y
QN05	A6317440	Transistor, 2SC1815-Y
QN07	A6317440	Transistor, 2SC1815-Y
QN08	A6002040	Transistor, RN1204
QN09	A6002060	Transistor, RN1206
QN10	A6002040	Transistor, RN1204
QN11	A6317440	Transistor, 2SC1815-Y

Location No.	Part No.	Description
QP02	A6317440	Transistor, 2SC1815-Y
QP05	A6734585	Transistor, 2SC752GTM-O
QP07	A6534040	Transistor, 2SA1015-Y
QP08	A6534040	Transistor, 2SA1015-Y
QP09	A6317440	Transistor, 2SC1815-Y
QP11	A6002040	Transistor, RN1204
QP13	A6534040	Transistor, 2SA1015-Y
QP14	A6534040	Transistor, 2SA1015-Y
QP16	A6317440	Transistor, 2SC1815-Y
QP18	A6734585	Transistor, 2SC752GTM-O
QP19	A6317440	Transistor, 2SC1815-Y
QP20	A6002040	Transistor, RN1204
QP21	A6002060	Transistor, RN1206
QS02	A6317440	Transistor, 2SC1815-Y
QS03	A6317440	Transistor, 2SC1815-Y
QS06	A6534040	Transistor, 2SA1015-Y
QS07	A6317440	Transistor, 2SC1815-Y
QS08	A6317440	Transistor, 2SC1815-Y
QS11B	23035308	Screw, BTB3X8SZN
QS11C	23030211	Screw, 3X14SN
QS12	A6342200	Transistor, 2SC2878-A
QS14	A6534040	Transistor, 2SA1015-Y
QV01	A6317440	Transistor, 2SC1815-Y
QV02	A6317440	Transistor, 2SC1815-Y
QV03	A6317440	Transistor, 2SC1815-Y
QV04	A6342200	Transistor, 2SC2878-A
QV05	A6317440	Transistor, 2SC1815-Y
QV06	A6534040	Transistor, 2SA1015-Y
QV08	A6534040	Transistor, 2SA1015-Y
QV11	A6317440	Transistor, 2SC1815-Y
QV12	A6317440	Transistor, 2SC1815-Y
QV13	A6342200	Transistor, 2SC2878-A
QV14	A6342200	Transistor, 2SC2878-A
QV16	A6534040	Transistor, 2SA1015-Y
QW03	A6534040	Transistor, 2SA1015-Y
QW04	A6317440	Transistor, 2SC1815-Y
QX61	A6534040	Transistor, 2SA1015-Y
QX62	A6534040	Transistor, 2SA1015-Y
QX63	A6534040	Transistor, 2SA1015-Y
QX64	A6317440	Transistor, 2SC1815-Y
QX65	A6534040	Transistor, 2SA1015-Y
QX66	A6534040	Transistor, 2SA1015-Y
QX67	A6534040	Transistor, 2SA1015-Y
QY05	A6534040	Transistor, 2SA1015-Y
QY08	A6317440	Transistor, 2SC1815-Y
QY09	A6317440	Transistor, 2SC1815-Y
QY10	A6317440	Transistor, 2SC1815-Y
QY11	A6317440	Transistor, 2SC1815-Y
QY12	A6317440	Transistor, 2SC1815-Y
QY13	A6534040	Transistor, 2SA1015-Y
QY15	A6342200	Transistor, 2SC2878-A
QY16	A6317440	Transistor, 2SC1815-Y
QZ30	A6534040	Transistor, 2SA1015-Y
QZ31	A6534040	Transistor, 2SA1015-Y
QZ32	A6317440	Transistor, 2SC1815-Y
QZ36	A6534040	Transistor, 2SA1015-Y
QZ37	A6317440	Transistor, 2SC1815-Y
QZ38	A6317440	Transistor, 2SC1815-Y
D101	A7288601	Diode, 1S2186 FA-1
D102	A7288601	Diode, 1S2186 FA-1
D103	A7288601	Diode, 1S2186 FA-1
D104	A7288601	Diode, 1S2186 FA-1
D106	A7288601	Diode, 1S2186 FA-1
D107	A7288601	Diode, 1S2186 FA-1

Location No.	Part No.	Description
D108	A7116305	Diode, Zener, 04AZ5.1X
D109	A7288601	Diode, 1S2186 FA-1
D110	A7288601	Diode, 1S2186 FA-1
D111	A7117015	Diode, Zener, 04AZ10Y
D201	A7288601	Diode, 1S2186 FA-1
D241	A7150041	Diode, 1SS104
D260	A7150258	Diode, 1SS176
D262	A7115605	Diode, Zener, 04AZ2.7X
D263	A7150258	Diode, 1SS176
D302	A7568250	Diode, 1S1834
D303	23118977	Diode, ERC01-02FL
D315	A7116715	Diode, Zener, 04AZ7.5Y
D316	A7117615	Diode, Zener, 04AZ18Y
D317	A7150258	Diode, 1SS176
D320	A7150258	Diode, 1SS176
D321	A7150258	Diode, 1SS176
D362	A7150258	Diode, 1SS176
D364	A7116715	Diode, Zener, 04AZ7.5Y
D366	A7116215	Diode, Zener, 04AZ4.7Y
D367	A7150258	Diode, 1SS176
D368	A7118115	Diode, Zener, 04AZ30Y
D401	A7116925	Diode, Zener, 04AZ9.1Z
D402	A7117215	Diode, Zener, 04AZ12Y
D405	A7117715	Diode, Zener, 04AZ20Y
D406	A7978850	Diode, S5295G
D408	23118451	Diode, RU4A
D410	A7116815	Diode, Zener, 04AZ8.2Y
D440	23316254	Diode, ERC06-15
D441	A7580656	Diode, 3JH61 FA-2
D594	A7150258	Diode, 1SS176
D595	A7150258	Diode, 1SS176
D614	A7150258	Diode, 1SS176
D615	A7150258	Diode, 1SS176
D617	A7150258	Diode, 1SS176
D618	A7150258	Diode, 1SS176
D620	A7150258	Diode, 1SS176
D803	23316275	Diode, RBV606 LF-A
D807	A7978850	Diode, S5295G
D808	A7978850	Diode, S5295G
D809	A7978850	Diode, S5295G
D810	A7568300	Diode, 1S1835
D811	A7117415	Diode, Zener, 04AZ15Y
D812	A7978850	Diode, S5295G
D813	A7978850	Diode, S5295G
D814	A7978850	Diode, S5295G
D815	A7978850	Diode, S5295G
D816	A7978850	Diode, S5295G
D817	23118451	Diode, RU4A
D818	23118338	Diode, RU4AM
D819	A7568300	Diode, 1S1835
D820	A7116615	Diode, Zener, 04AZ6.8Y
D821	A7150258	Diode, 1SS176
D822	A7275400	Diode, 1S2462
D823	A7275400	Diode, 1S2462
D824	A7150258	Diode, 1SS176
D825	A7116505	Diode, Zener, 04AZ6.2X
D826	23118338	Diode, RU4AM
D827	A7117305	Diode, Zener, 04AZ13X
D828	23118338	Diode, RU4AM
D829	23118451	Diode, RU4A
D830	A7150258	Diode, 1SS176
D832	A7116615	Diode, Zener, 04AZ6.8Y
D833	A7978850	Diode, S5295G
D834	A7116615	Diode, Zener, 04AZ6.8Y

Location No.	Part No.	Description
D835	A7150258	Diode, 1SS176
D836	A7150258	Diode, 1SS176
D837	A7568300	Diode, 1S1835
DA03	A7150258	Diode, 1SS176
DA08	A7150258	Diode, 1SS176
DA09	A7150258	Diode, 1SS176
DA10	23115878	Diode, Zener, µPC574J(L)
DA11	A7150258	Diode, 1SS176
DA12	A7150258	Diode, 1SS176
DA17	A7150258	Diode, 1SS176
DA18	A7150258	Diode, 1SS176
DA19	A7150258	Diode, 1SS176
DA20	A7150258	Diode, 1SS176
DA21	A7150258	Diode, 1SS176
DA22	A7150258	Diode, 1SS176
DA23	A7150258	Diode, 1SS176
DA24	A7150258	Diode, 1SS176
DA25	A7150258	Diode, 1SS176
DA27	A7150258	Diode, 1SS176
DA28	A7150258	Diode, 1SS176
DA30	A7150258	Diode, 1SS176
DA31	A7150258	Diode, 1SS176
DA32	A7150258	Diode, 1SS176
DA33	A7150258	Diode, 1SS176
DB40	A7150258	Diode, 1SS176
DE55	A8636540	Diode (LED), TLS153, Red
DG01	A7150258	Diode, 1SS176
DG02	A7150258	Diode, 1SS176
DG03	A7150258	Diode, 1SS176
DG04	A7150258	Diode, 1SS176
DG05	A7150258	Diode, 1SS176
DG55	A8612100	Diode (LED), TLO153, Orange
DG56	A8612100	Diode (LED), TLO153, Orange
DH01	A7150258	Diode, 1SS176
DH02	A7150258	Diode, 1SS176
DH03	A7150258	Diode, 1SS176
DH08	A7150258	Diode, 1SS176
DH10	A7150258	Diode, 1SS176
DH11	A7150258	Diode, 1SS176
DH12	A7150258	Diode, 1SS176
DH13	A7150258	Diode, 1SS176
DH14	A7150258	Diode, 1SS176
DH15	A7150258	Diode, 1SS176
DH23	A7150258	Diode, 1SS176
DH24	A7150258	Diode, 1SS176
DH25	A7150258	Diode, 1SS176
DH29	A7150258	Diode, 1SS176
DH30	A7150258	Diode, 1SS176
DH31	A7150258	Diode, 1SS176
DH32	A7150258	Diode, 1SS176
DK01	A7117015	Diode, Zener, 04AZ10Y
DK02	A7150258	Diode, 1SS176
DP01	A7116925	Diode, Zener, 04AZ9.1Z
DP02	A7150258	Diode, 1SS176
DP05	A7150258	Diode, 1SS176
DS01	A7150258	Diode, 1SS176
DS02	A7150258	Diode, 1SS176
DS03	A7150258	Diode, 1SS176
DS04	A7150258	Diode, 1SS176
DS10	A7150258	Diode, 1SS176
DS11	A7150258	Diode, 1SS176
DS13	A7150258	Diode, 1SS176

Location No.	Part No.	Description
DS55	A8608780	Diode (LED), TLY153, Yellow
DS56	A8612100	Diode (LED), TLO153, Orange
DV01	A7150258	Diode, 1SS176
DV05	A7116915	Diode, Zener, 04AZ9.1Y
DV06	A7150258	Diode, 1SS176
DV07	A7150258	Diode, 1SS176
DV10	A7150258	Diode, 1SS176
DV11	A7150258	Diode, 1SS176
DW01	A7116925	Diode, Zener, 04AZ9.1Z
DW02	A7150258	Diode, 1SS176
DW03	A7150258	Diode, 1SS176
DX01	A7116915	Diode, Zener, 04AZ9.1Y
DX02	A7150258	Diode, 1SS176
DZ33	A7150258	Diode, 1SS176
DZ34	A7150258	Diode, 1SS176
DZ35	A7150258	Diode, 1SS176
DZ36	A7150258	Diode, 1SS176

MISCELLANEOUS

B202	23864265	Frame
B209	23712306	Screw, PP3X.5X SZN
⚠ F801	23144868	Fuse, 3.15A
F801A	23165102	Fuse Holder
H003	23107494	ANT. Divider
K901	23120599	Remote Sensor, IR-9105-D
L462A	23993402	Compensator, DY, TC-K
L462B	23993380	Compensator, DY, TC-N
L462C	23993348	Compensator, DY, TC-P
L462E	23993622	Compensator, DY, TC-M
P003	23161701	Terminal, 4P
P610B	23901864	Socket, 7P
P661	23363607	Headphone Jack, 3.5mm
P690	23164563	Plug, 3P
⚠ P801	23176704	Power Cord
PV03	23363871	Pin Jack, Red
PV04	23363873	Pin Jack, White
PV05	23363871	Pin Jack, Red
PV06	23363873	Pin Jack, White
PV07	23902604	Socket, 21P
PV08	23902604	Socket, 21P
PV40	23365259	Jack, 4P
S001	23145412	Switch, Slide, 2C2P
S101	23145406	Switch, Slide, 2C3P
S102	23145363	Switch, Slide, 1C2P
S201	23145296	Switch, Push, 2P
S202	23145318	Switch, Slide, 2C3P
S301	23145542	Switch, Lever, 1C3P
⚠ S801	23145434	Switch, Power, 2C2P
SA01	23145226	Switch, Push, 1C1P
SA02	23145226	Switch, Push, 1C1P
SA03	23145226	Switch, Push, 1C1P
SA04	23145226	Switch, Push, 1C1P
SA05	23145226	Switch, Push, 1C1P
SA06	23145226	Switch, Push, 1C1P
SA07	23145226	Switch, Push, 1C1P
SA08	23145226	Switch, Push, 1C1P
SA09	23145226	Switch, Push, 1C1P
SA10	23145226	Switch, Push, 1C1P
SA11	23145226	Switch, Push, 1C1P
SA12	23145226	Switch, Push, 1C1P
SK01	23145411	Switch, Slide, 2C2P
⚠ V901A	23902019	Socket, CRT, 10P

Location No.	Part No.	Description
V901C	23192818	Sticker, Z2013A
V901M	23102856	Magnet, Purity-Convergence, MAG-1046
W201	23250878	Coil, Delay Line, TRF2083
W660	23151202	Speaker, SPK-1270, 100x100mm, 8 ohm
W661	23351004	Speaker, SPK-1278, 70x130mm, 8 ohm
W662	23351004	Speaker, SPK-1278, 70x130mm, 8 ohm
W663	23151296	Speaker, SPK-1107A, 30x30mm, 3000 ohm
W664	23151296	Speaker, SPK-1107A, 30x30mm, 3000 ohm
WP02	23250925	Coil, Delay Line, TRF2065A
WP03	23250926	Coil, Delay Line, TRF2065
WX60	23250927	Coil, Delay Line, TRF2064
X101	23153725	Ceramic Resonator, TCR1043
X401	23153886	Ceramic Resonator, 503kHz, TCR1012
X501	23153979	Crystal, 4.43MHz
X502	23153797	1H-Delay Line, PAL, ED645A41T
XA01	23153860	Crystal, 32.768kHz
XK01	23153725	Ceramic Resonator, TCR1043
XP02	23153979	Crystal, 4.43MHz
XP03	23153797	1H-Delay Line, PAL, ED645A41T
XP04	23153886	Ceramic Resonator, 503kHz, TCR1012
Z101	A5613170	PIF SAW Filter, F1038
Z102	A5615257	BG.I.DK WSSF, F1808D
Z104	23107911	Ceramic Video Trap, 5.5 to 6MHz, TCF1019
Z105	23107658	Ceramic Video Trap, 5.74MHz, TCF1052
Z106	23107944	Ceramic Video Trap, 6.5MHz, TPS6.5MB7
Z670	23107947	Ceramic Filter, 5.5MHz, SFE5.5MBF
Z671	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
Z672	23107949	Ceramic Filter, 6.5MHz, SFE6.5MBF
Z673	23153900	Ceramic Resonator, 500kHz, TCR1010
Z674	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
ZA01	24000516	Resistor Block, 4700 ohmx3, 1/10W
ZA02	24000548	Resistor Block, 47k ohmx4, 1/10W
ZA04	24000521	Resistor Block, 4700 ohmx8, 1/10W
ZA05	24000428	Resistor Block, 47k ohmx8, 1/10W
ZA07	24000516	Resistor Block, 4700 ohmx3, 1/10W
ZA08	24094651	Capacitor Block, 100pFx4, 50V
ZA09	23153741	Ceramic Resonator, TCR1029
ZK01	A5611192	PIF SAW Filter, F1037C
ZK02	23107947	Ceramic Filter, 5.5MHz, SFE5.5MBF
ZK03	23107944	Ceramic Video Trap, 6.5MHz, TPS6.5MB7
ZK04	23107911	Ceramic Video Trap, 5.5 to 6MHz, TCF1019
ZK05	23107658	Ceramic Video Trap, 5.74MHz, TCF1052
ZK06	A5613025	L-Secam WSSF, F328EM
ZK07	23107897	Ceramic Video Trap, 5.5MHz, TCF1023
ZP03	23148739	PIP HIC Unit, TY880073
ZP03A	23116915	Socket, 9P
ZP03B	23116949	Socket, 7P
ZP04	23107747	Filter, 3MHz, TEM1009
ZP06	23107746	Filter, 3MHz, TEM1010
ZP07	23107748	Filter, 3MHz, TEM1008
ZP08	23107746	Filter, 3MHz, TEM1010
ZP09	23107746	Filter, 3MHz, TEM1010
ZP10	23107746	Filter, 3MHz, TEM1010
ZP11	23107748	Filter, 3MHz, TEM1008
ZP12	23107746	Filter, 3MHz, TEM1010
ZP13	23107746	Filter, 3MHz, TEM1010
ZP15	23107748	Filter, 3MHz, TEM1008
ZP16	23107746	Filter, 3MHz, TEM1010
ZP17	23107746	Filter, 3MHz, TEM1010
ZP18	23107746	Filter, 3MHz, TEM1010
ZP19	23107746	Filter, 3MHz, TEM1010
ZP20	23107746	Filter, 3MHz, TEM1010
ZP22	23107746	Filter, 3MHz, TEM1010
ZP23	23107746	Filter, 3MHz, TEM1010
ZP24	23107746	Filter, 3MHz, TEM1010
ZP25	23107746	Filter, 3MHz, TEM1010
ZP26	23107746	Filter, 3MHz, TEM1010
ZP27	23107746	Filter, 3MHz, TEM1010
ZP28	23107746	Filter, 3MHz, TEM1010
ZP30	23107746	Filter, 3MHz, TEM1010
ZP31	23107746	Filter, 3MHz, TEM1010
ZP32	23107746	Filter, 3MHz, TEM1010
ZV01	23107849	Ceramic Video Trap, 4.43MHz, TCF1032

PC BOARD ASSEMBLIES

Location No.	Part No.	Description
U902	23336260	Main Board, PW9874
U903	23336261	Power/Def Board, PW9875
U904A	23336265	CRT Drive Board, PW9876-1
U904B	23336266	Back Terminal Board, PW9876-2
U904C	23336267	CTI Board, PW9876-3
U904D	23336268	R.G.B. Board, PW9876-4
U904E	23336269	PIF Board, PW9876-5
U905A	23336270	PIP Board, PW9877-1
U905B	23336271	DPC-2 Board, PW9877-2
U905C	23336272	DPC-1 Board, PW9877-3
U906A	23336273	Key Board, PW9878-1
U906B	23336274	LED Board, PW9878-2
U906C	23336275	Headphone Board, PW9878-3
U906D	23336276	Control Board, PW9878-4

PICTURE TUBE

Location No.	Part No.	Description
⚠ V901	A5557639	Picture Tube, A80JYQ96X∗HA

TUNER

Location No.	Part No.	Description
H001	23121736	Tuner, VHF/UHF, EF432S

Location No.	Part No.	Description
H002	23121737	Tuner, VHF/UHF, EG731A

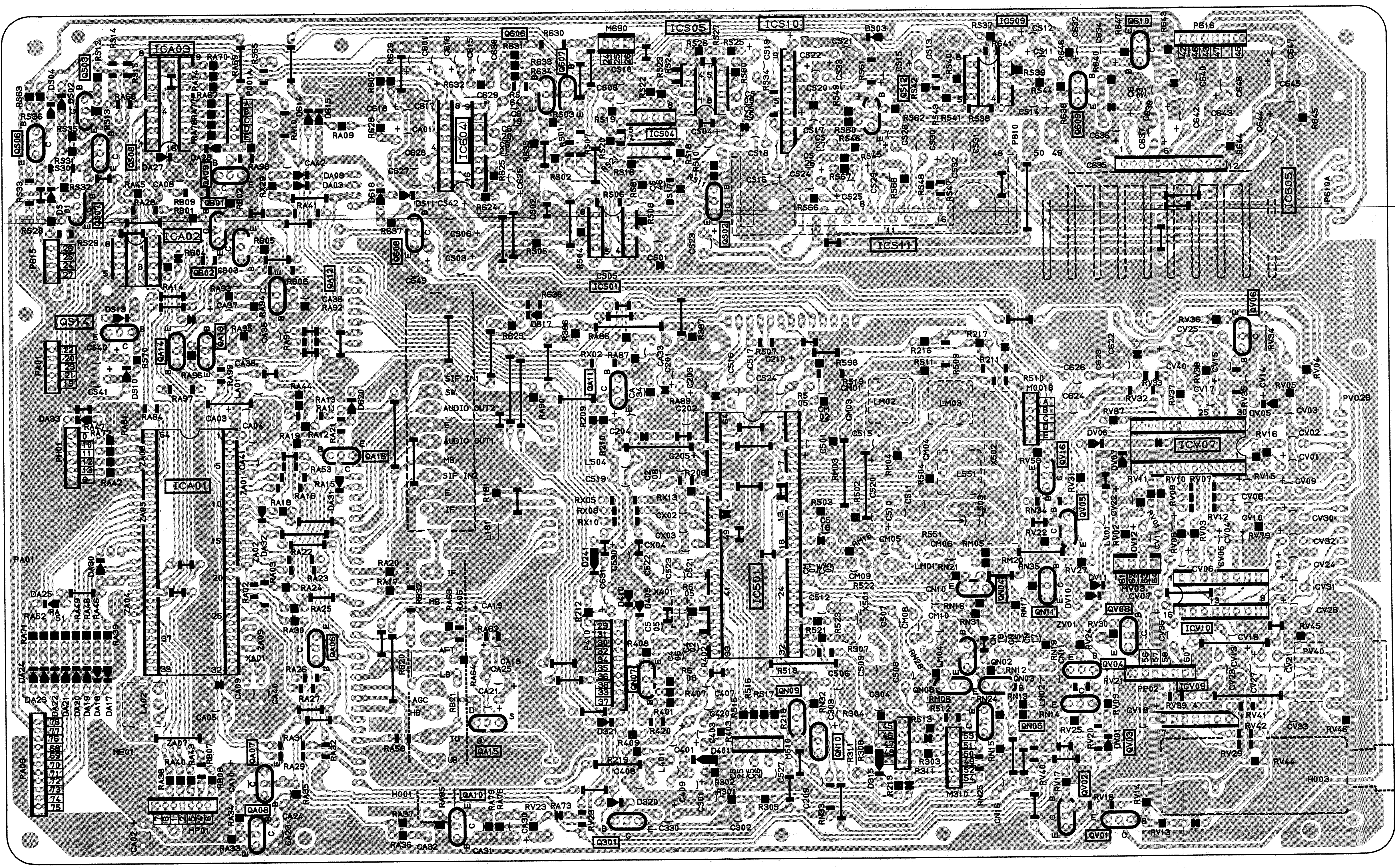
REMOTE HAND SET PARTS

Location No.	Part No.	Description
K902	23120492	Remote Hand Unit, CT-9386
AT01	23300892	Upper Case
AT02	23300759	Lower Case
AT03	23300760	Battery Cover
AT04	23309657	Filter
ST01	23300893	Rubber Sheet
UT01	23335512	PC Board, PW6970
ZT01	23153736	Ceramic Resonator, CSB455EB20

Location No.	Part No.	Description

MAIN BOARD PW9874

BOTTOM (FOIL) SIDE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P410
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ME01
PA01
PA03
PH01
PS15
H001
H003
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SW
AUDIO OUT2
E
AUDIO OUT1
MB
SIF IN2
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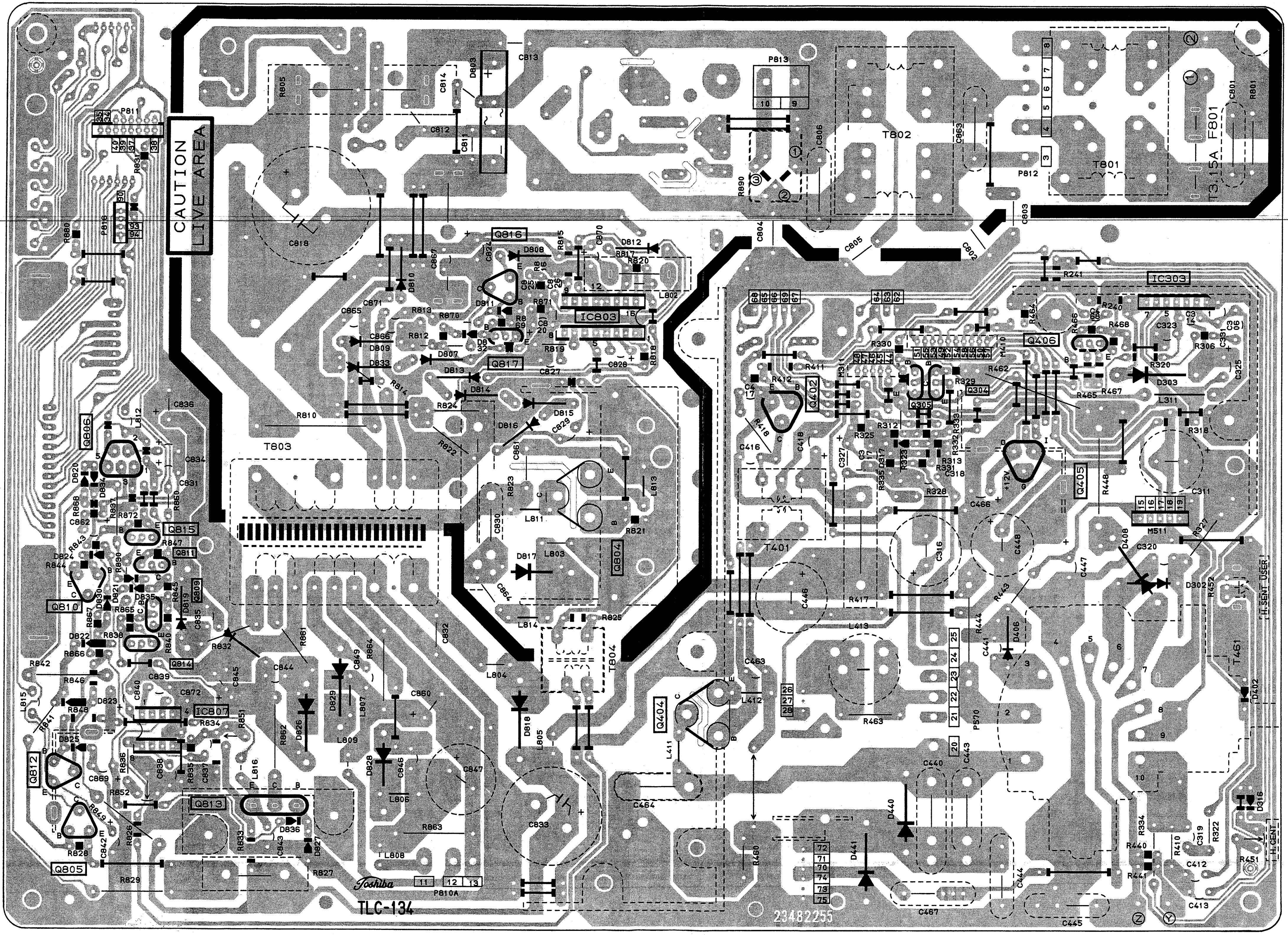
IF
MB
AFT
LB
HB
AGC
TU
UB
233482652

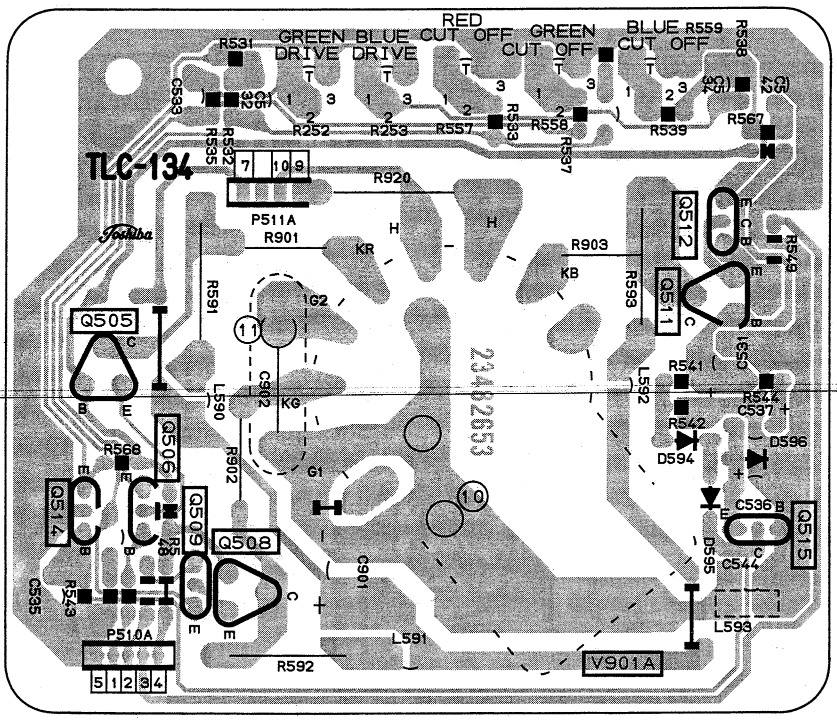
POWER/DEF BOARD PW9875

BOTTOM (FOIL) SIDE


CAUTION
LIVE AREA
T3.15A F801
T801
T802
T803
T804
T401
IC803
IC807
IC303
P811
P813
P812
P810A
P570
M511
Toshiba
TLC-134
23482255
H.SENT USER
H.CENT

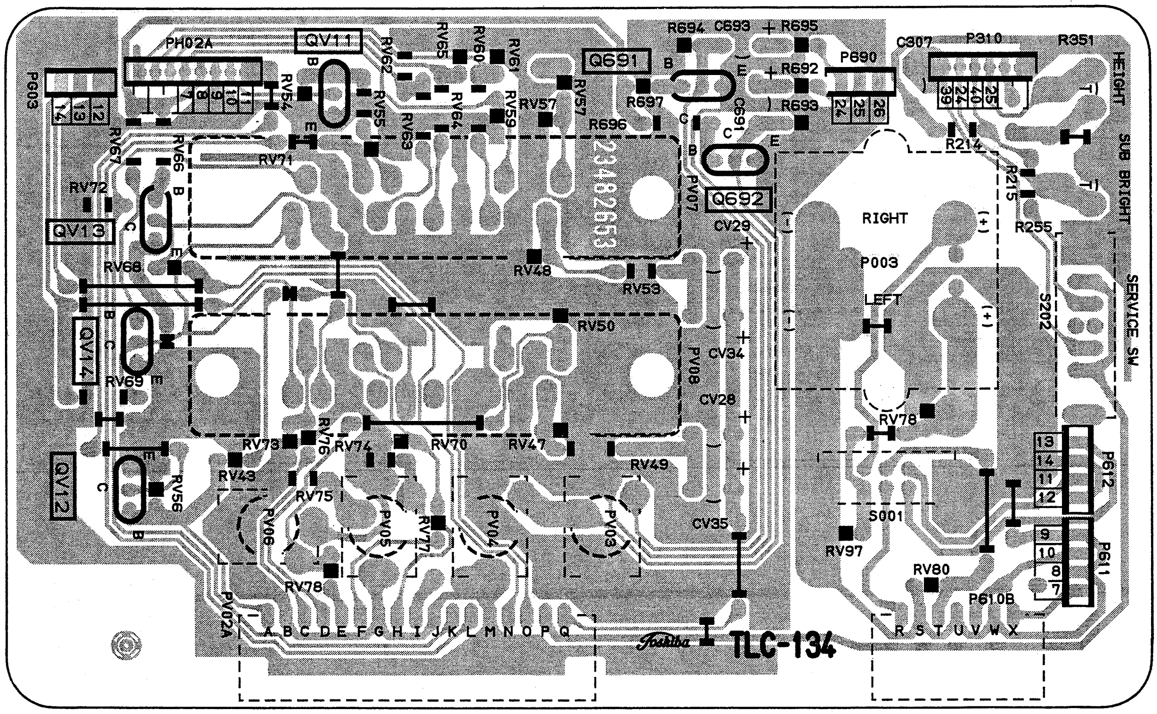
CRT DRIVE BOARD PW9876-1

BOTTOM (FOIL) SIDE


RED
GREEN DRIVE
BLUE DRIVE
RED CUT OFF
GREEN CUT OFF
BLUE CUT OFF
R531
R559
R538
C533
C532
C534
C542
R252
R253
R557
R539
R558
R537
R539
R567
R535
R532
TLC-134
P511A
R920
R901
H
KR
R903
KB
Q512
Q511
R549
R591
R593
G2
Q505
C902
KG
L590
L592
R541
C551
R544
C537
R542
D594
D596
R568
Q506
R902
G1
Q514
Q509
Q508
R548
C536
D595
C544
Q515
C535
R543
C901
P510A
L591
R592
V901A
L593
23482653
11
10

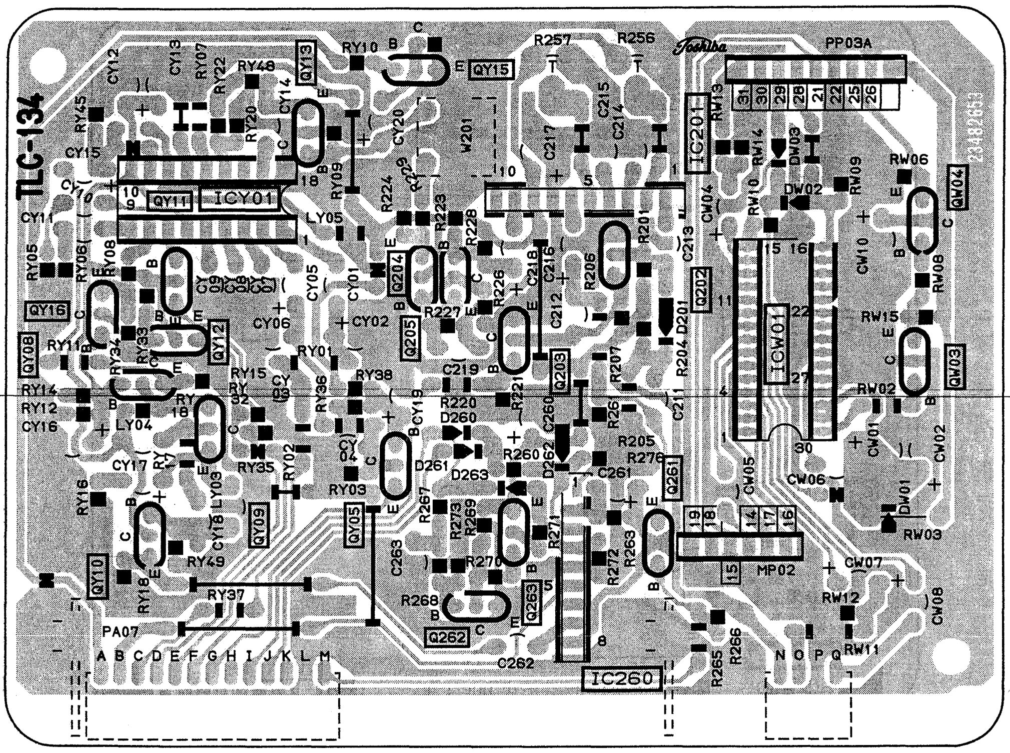
BACK TERMINAL BOARD PW9876-2

BOTTOM (FOIL) SIDE


PG03
PH02A
QV11
RV62
RV65
RV60
RV61
R694
C693
R695
Q691
R692
P690
C307
P310
R351
HEIGHT
SUB BRIGHT
RV54
RV55
RV64
RV59
RV57
R697
C691
R693
RV63
R696
RV67
RV66
RV71
PV07
Q692
R214
R215
RV72
QV13
CV29
RIGHT
R255
RV68
RV48
RV53
P003
LEFT
S202
SERVICE SW
QV14
RV50
PV08
CV34
RV69
CV28
RV78
RV73
RV76
RV74
RV70
RV47
P612
QV12
RV43
RV56
RV49
RV75
PV06
PV05
RV77
PV04
PV03
CV35
S001
RV97
P611
RV80
P610B
RV78
PV02A
A B C D E F G H I J K L M N O P Q
R S T U V W X
TLC-134
23482653

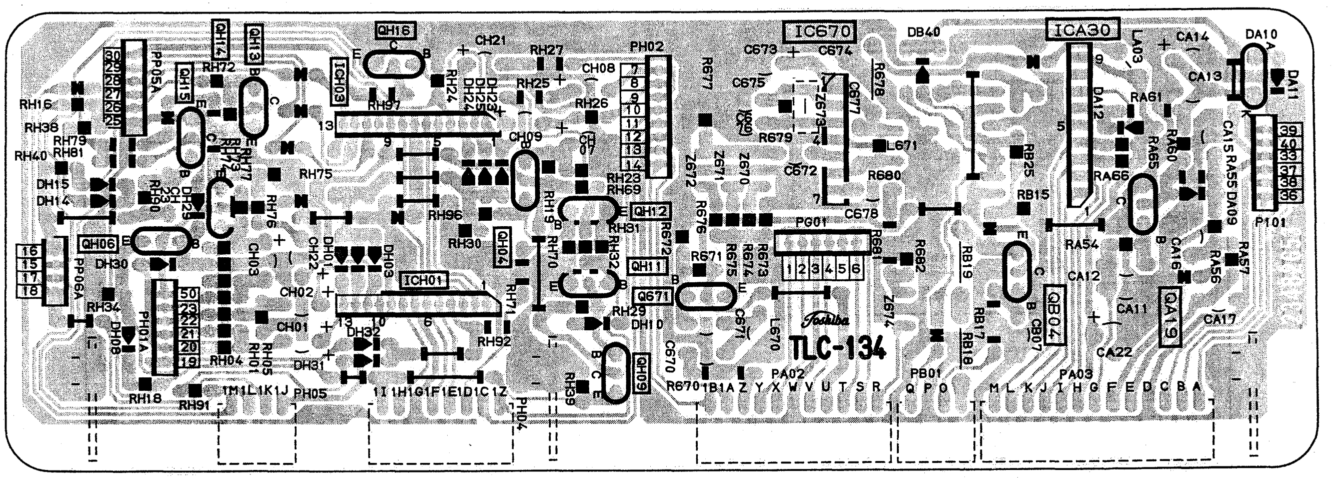
CTI BOARD PW9876-3

BOTTOM (FOIL) SIDE


TLC-134
Toshiba
ICY01
IC201
ICW01
IC260
PP03A
MP02
PA07
A B C D E F G H I J K L M
N O P Q
QY13
QY15
QY11
QY16
QY08
QY12
QY09
QY05
QY10
Q204
Q205
Q202
Q203
Q261
Q263
Q262
QW04
QW03
31 30 29 28 21 22 25 26
19 18 14 17 16 15

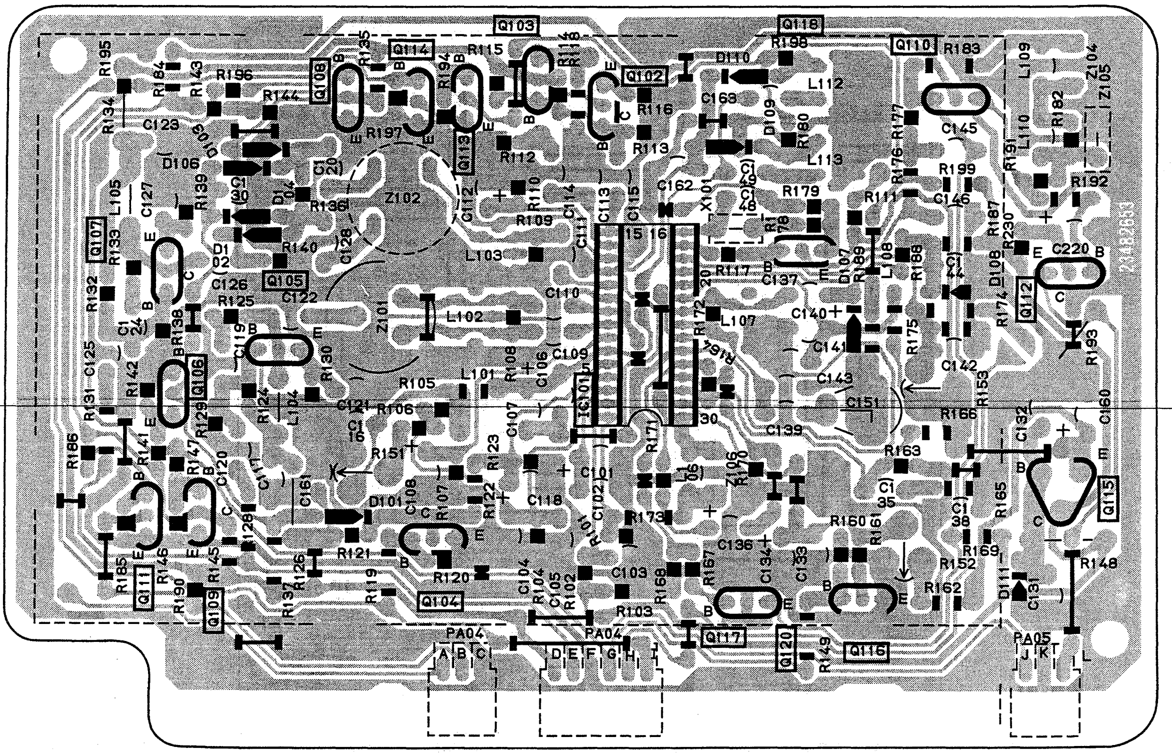
R.G.B. BOARD PW9876-4

BOTTOM (FOIL) SIDE


TLC-134
Toshiba
IC670
ICA30
ICH03
ICH01
PH02
PP05A
PP06A
PH01A
PH05
PH04
PG01
PA02
PB01
PA03
P101
QH14
QH13
QH15
QH16
QH06
QH12
QH11
QH04
QH09
Q671
QB04
QA19
DB40
DA10
DA11
TM1L1K1J
1I1H1G1F1E1D1C1Z
1B1A Z Y X W V U T S R
Q P O
M L K J I H G F E D C B A

IF BOARD PW9876-5

BOTTOM (FOIL) SIDE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Q114
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Q102
Q113
Q107
Q105
Q106
Q112
Q115
Q111
Q109
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Q117
Q120
Q116
IC101
Z101
Z102
X101
L102
L103
L104
L105
L107
L108
L109
L110
L112
L113
D106
D109
D110
D107
D108
D111
D101
R195
R184
R143
R196
R144
R134
R135
R115
R194
R114
R118
R198
R183
R116
R197
R112
R113
R110
R109
R136
R139
R140
R133
R132
R138
R125
R130
R142
R131
R129
R124
R105
R106
R108
R117
R172
R154
R179
R111
R199
R177
R176
R180
R189
R188
R175
R174
R230
R187
R191
R182
R192
R193
R153
R166
R163
R165
R169
R152
R162
R148
R160
R161
R149
R167
R168
R103
R102
R104
R173
R101
R170
R171
R186
R141
R147
R146
R145
R185
R190
R137
R126
R121
R120
R119
R122
R123
R107
R151
C123
C127
C126
C122
C128
C112
C114
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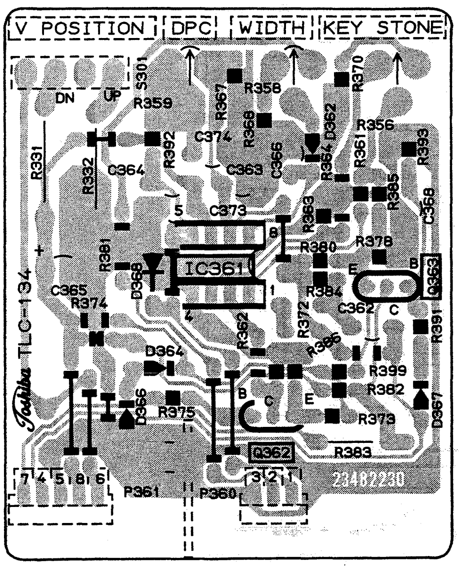
C116
C119
C120
C117
C161
C108
C118
C101
C102
C104
C105
C103
C136
C134
C133
C131
C132
C160
C138
C135
C139
C143
C151
C141
C140
C142
C137
C162
C163
C145
C146
C220
C124
C125
PA04
A B C
D E F G H
PA05
J K L
23482633

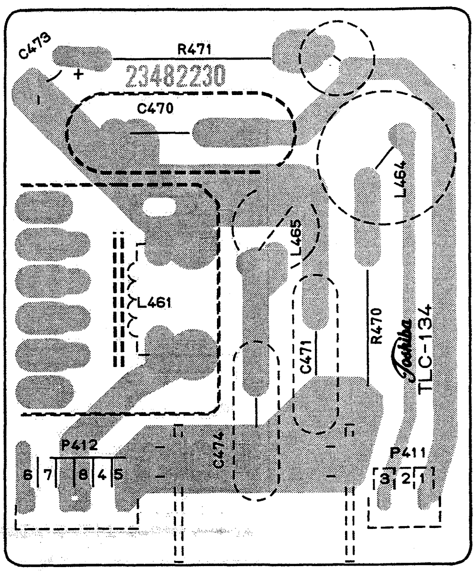
DPC-2 BOARD PW9877-2

BOTTOM (FOIL) SIDE


V POSITION
DPC
WIDTH
KEY STONE
DN
UP
S301
R359
R358
R367
R368
R370
D362
R356
R361
R393
R331
R332
C364
R392
C374
C363
C366
R364
R385
C358
C373
R363
R360
R378
IC361
R381
D368
C365
R374
R384
C362
Q363
R391
R362
R372
R386
R399
R382
D364
D366
R375
R373
D367
Q362
R383
TLC-134
Toshiba
P361
P360
7 4 5 8 6
3 2 1
23482230

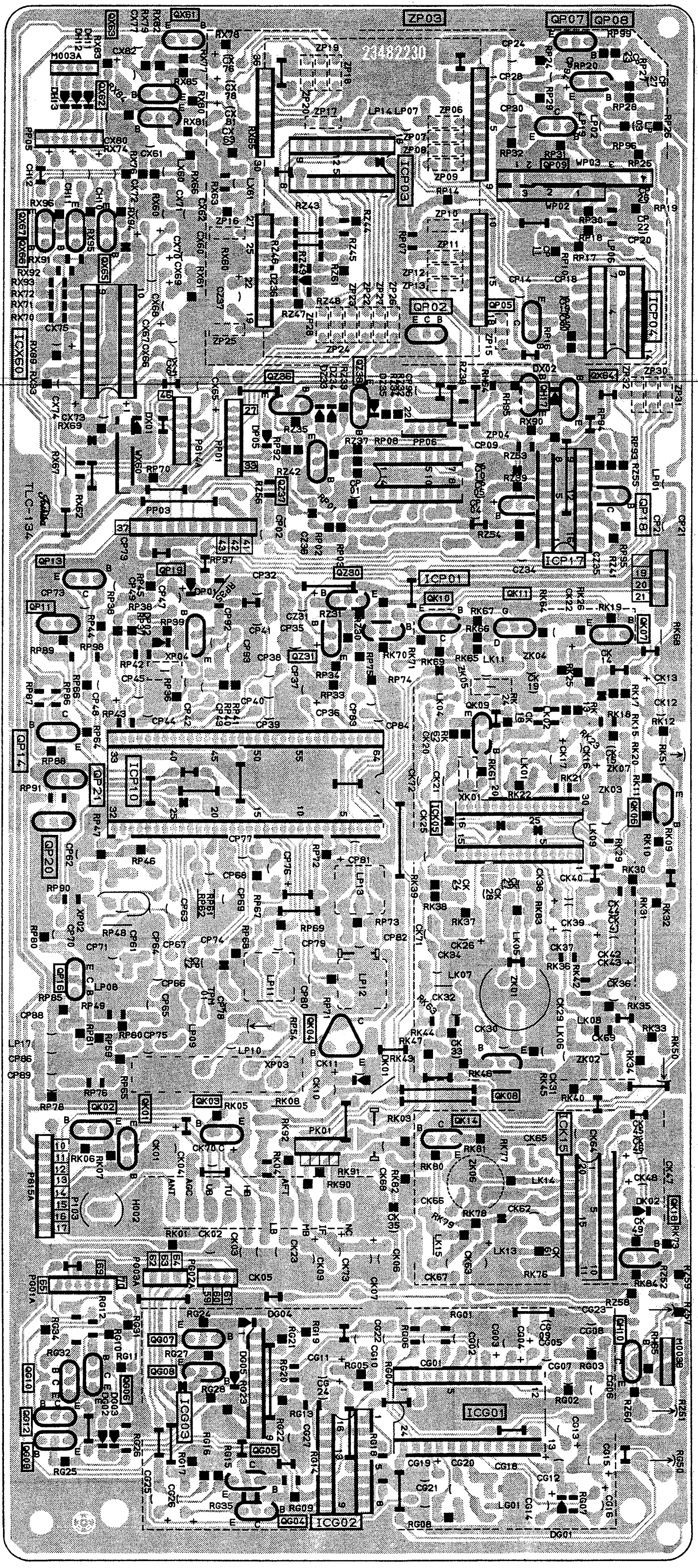
DPC-1 BOARD PW9877-3

BOTTOM (FOIL) SIDE


C473
R471
23482230
C470
L464
L465
L461
C471
R470
C474
Toshiba
TLC-134
P412
6 7 8 4 5
P411
3 2 1

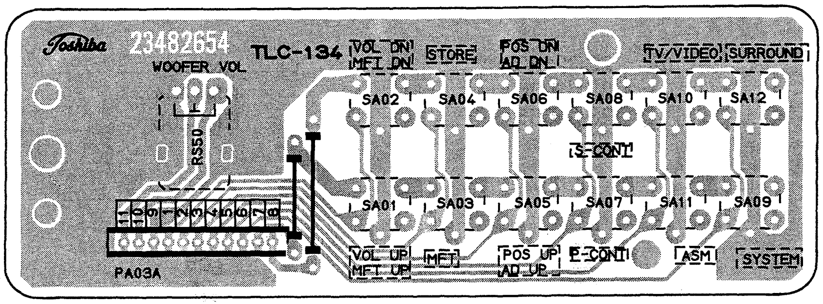
PIP BOARD PW9877-1

BOTTOM (FOIL) SIDE



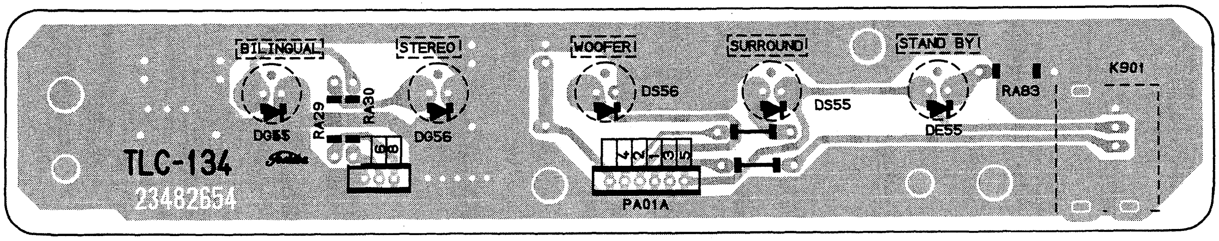
KEY BOARD PW9878-1

BOTTOM (FOIL) SIDE


Toshiba
23482654
TLC-134
WOOFER VOL
RS50
VOL DN
MFT DN
STORE
POS DN
AD DN
TV/VIDEO
SURROUND
SA02
SA04
SA06
SA08
SA10
SA12
S-CONT
SA01
SA03
SA05
SA07
SA11
SA09
11 10 9 1 2 3 4 5 6 7 8
PA03A
VOL UP
MFT UP
MFT
POS UP
AD UP
E-CONT
ASM
SYSTEM

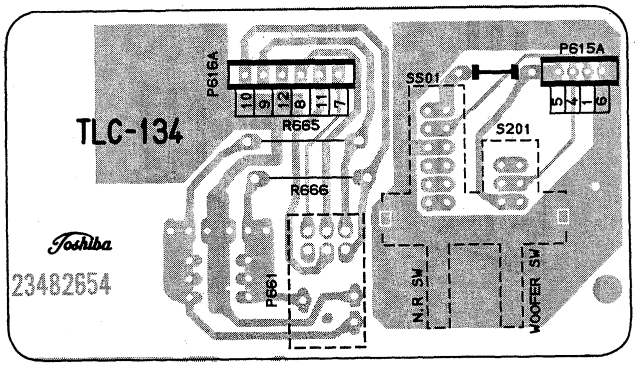
LED BOARD PW9878-2

BOTTOM (FOIL) SIDE


BILINGUAL
STEREO
WOOFER
SURROUND
STAND BY
DS56
DS55
DE55
RA83
K901
RA29
RA30
DG55
DG56
TLC-134
Toshiba
23482654
4 2 1 3 5
PA01A

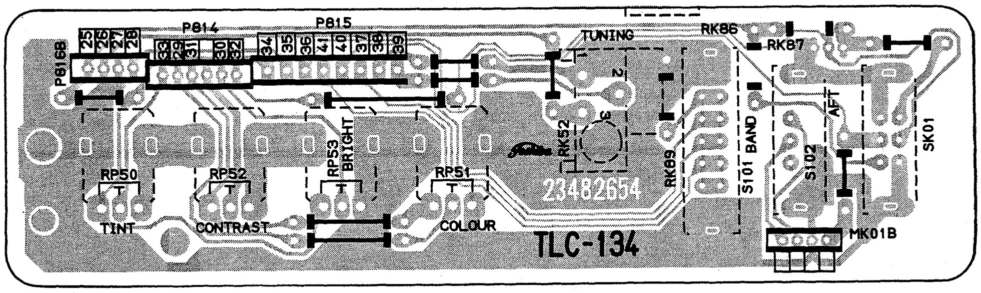
HEADPHONE BOARD PW9878-3

BOTTOM (FOIL) SIDE


P616A
10 9 12 8 11 7
R665
R666
TLC-134
Toshiba
23482654
P661
P615A
5 4 1 6
SS01
S201
N.R SW
WOOFER SW

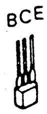
CONTROL BOARD PW9878-4

BOTTOM (FOIL) SIDE

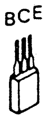

P816B
25 26 27 28
P814
33 29 31 30 32
P815
34 35 36 41 40 37 38 39
TUNING
RK86
RK87
2
3
RK52
RK89
S101 BAND
S102 AFT
SK01
RP50
RP52
RP53 BRIGHT
RP51
TINT
CONTRAST
COLOUR
Toshiba
23482654
TLC-134
MK01B

TERMINAL VIEW OF TRANSISTORS

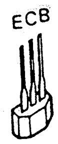
① 2SA1015
2SC388ATM
2SC1815
2SA562TM
2SC1959
2SC1627
2SC2878



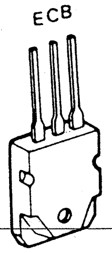
② 2SC2120
2SC2230
2SC2655



③ RN1203
RN1204
RN1206



④ 2SA1265N



⑤ 2SD553
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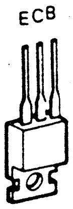
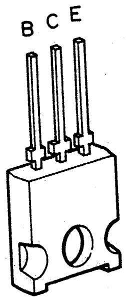
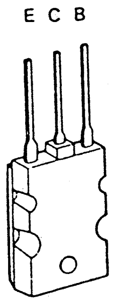
2SC2383
2SC3148
2SA1012



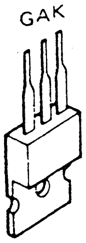
⑥ 2SC3619



⑦ 2SD1428



⑧ SF5J42



(SCR)

SCHEMATIC DIAGRAM MODEL 349P9F (1/4)

NOTE: The parts identified by the international hazard symbols are critical for safety. Replace only with part number specified.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal.
2. Voltages reading may vary ±20%.
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe
5. Check FINE TUNING, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position.
6. Waveforms are taken using a standard colour bar signal.

NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

RESISTOR

Table 1

Type	Mark
Carbon Composition	S
Oxide Metal Film	R
Insulated Carbon Film	P
Wire Wound	W
Cement	No Mark
Variable Resistor	-⧄-
Positive Thermistor	-⧄-
Negative Thermistor	-⊠-
Fusible Resistor	FR

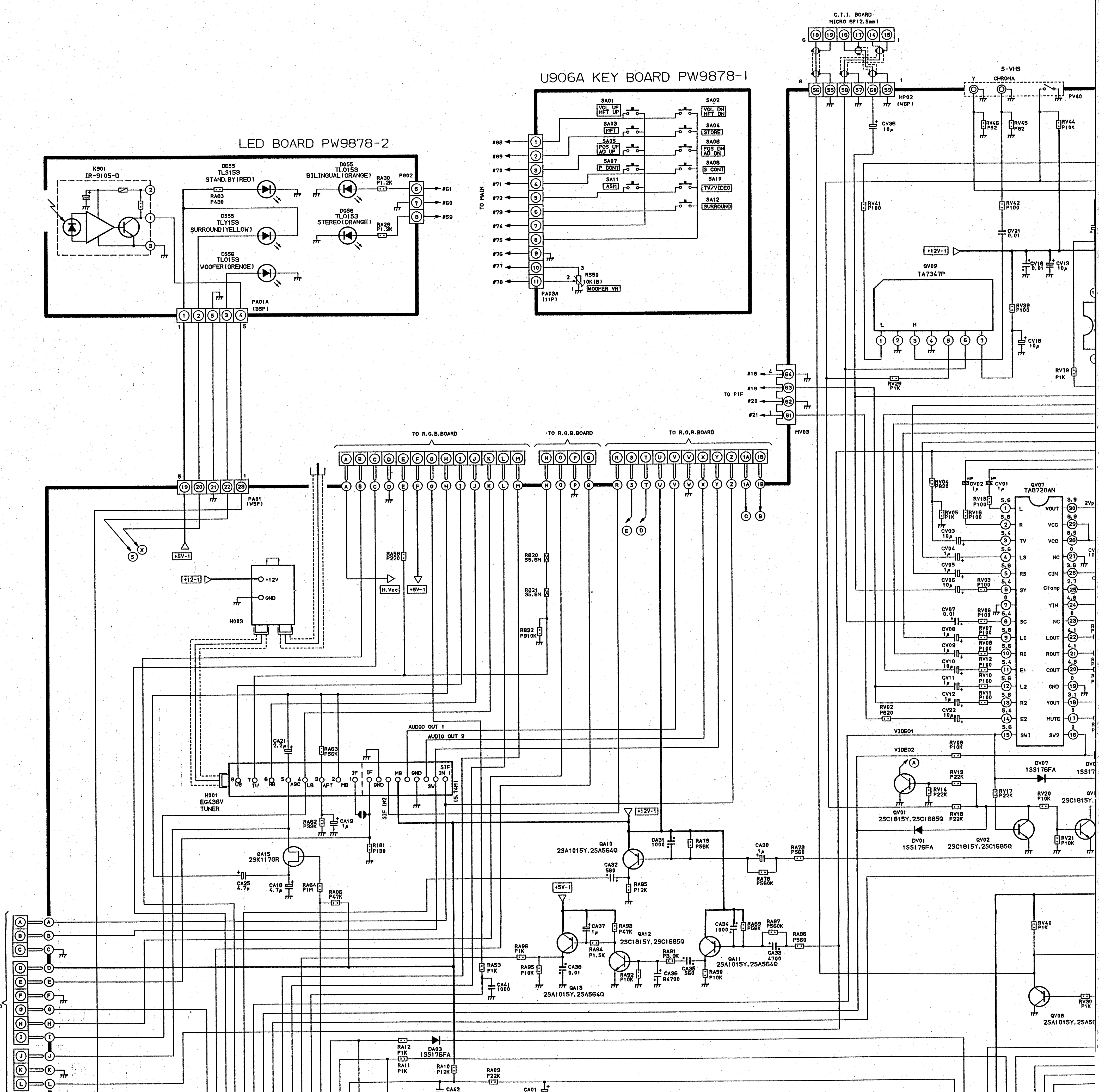
Table 2

Watt	Mark	Watt	Mark
1/6 W	-[··]-	3 W	-[3]-
1/8 W	-[·]-	5 W	-[5]-
1/4 W	-⊠-	10 W	-[10]-
1/2 W	-⧄-	15 W	-[15]-
1 W	-[1]-	20 W	-[20]-
2 W	-[2]-	25 W	-[25]-

CAPACITOR

Table 3

Type	Mark
Ceramic Disc 50V Only	-‖-
Electrolitic	±-‖- ±-‖-
Electrolitic Non-Polar	-‖- -‖‖-
Variable Capacitor	-‖-
Other	-‖-



LED BOARD PW9878-2
K901
IR-9105-D
DE55
TL5153
STAND.BY(RED)
D055
TL0153
BILINGUAL(ORANGE)
D555
TLY153
SURROUND(YELLOW)
D056
TL0153
STEREO(ORANGE)
D556
TL0153
WOOFER(ORENGE)
RA83
P430
RA30
P1.2K
RA29
P1.2K
P002
PA01A
(B5P)
PA01
(W5P)
U906A KEY BOARD PW9878-1
SA01
VOL UP
MFT UP
SA02
VOL DN
MFT DN
SA03
MFT
SA04
STORE
SA05
POS UP
AD UP
SA06
POS DN
AD DN
SA07
P CONT
SA08
S CONT
SA11
ASM
SA10
TV/VIDEO
SA12
SURROUND
R550
10K(B)
WOOFER VR
PA03A
(11P)
TO MAIN
C.T.I. BOARD
MICRO 6P(2.5mm)
S-VHS
Y
CHROMA
MP02
(W6P)
PV40
CV36
10μ
RV46
P82
RV45
P82
RV44
P10K
RV41
P100
RV42
P100
CV21
0.01
+12V-1
QV09
TA7347P
CV16
0.01
CV13
10μ
RV39
P100
CV18
10μ
RV79
P1K
RV29
P1K
TO PIF
HV03
TO R.G.B.BOARD
TO R.G.B.BOARD
TO R.G.B.BOARD
+5V-1
+12-1
+12V
GND
H003
RA58
P220
H.Vcc
+5V-1
R820
S5.6M
R821
S5.6M
RB32
P910K
AUDIO OUT 1
AUDIO OUT 2
CA21
2.2μ
RA63
P56K
H001
EG436V
TUNER
QA15
2SK117GR
CA25
4.7μ
CA18
4.7μ
RA64
P1M
RA08
P47K
RA62
P33K
CA19
1μ
RA81
P130
QA10
2SA1015Y,2SA564Q
CA31
1000
RA79
P56K
CA32
560
RA85
P12K
CA30
1μ
RA73
P560
RA76
P560K
+5V-1
CA37
1μ
RA93
P47K
QA12
2SC1815Y,2SC1685Q
RA94
P1.5K
RA96
P1K
RA95
P10K
CA38
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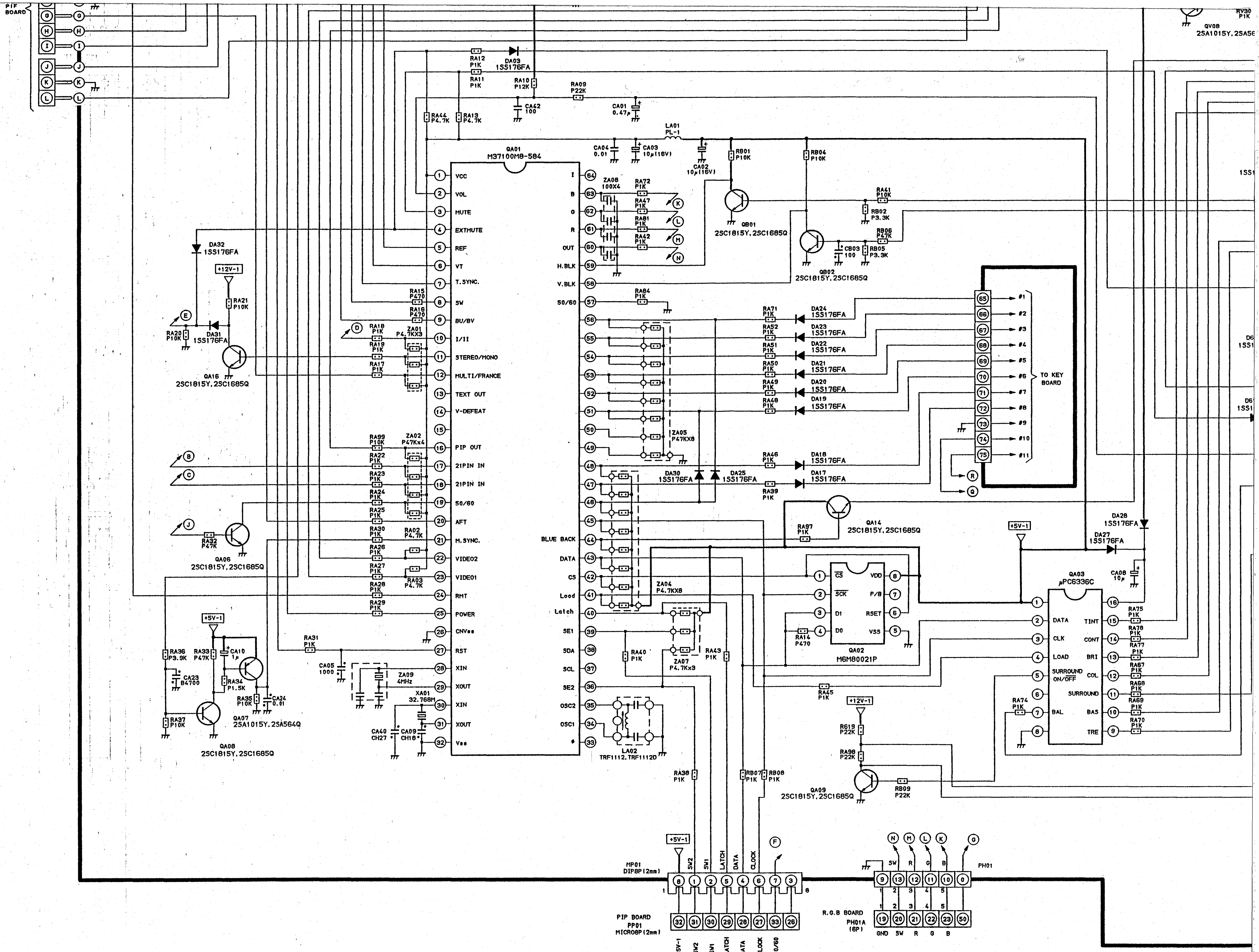
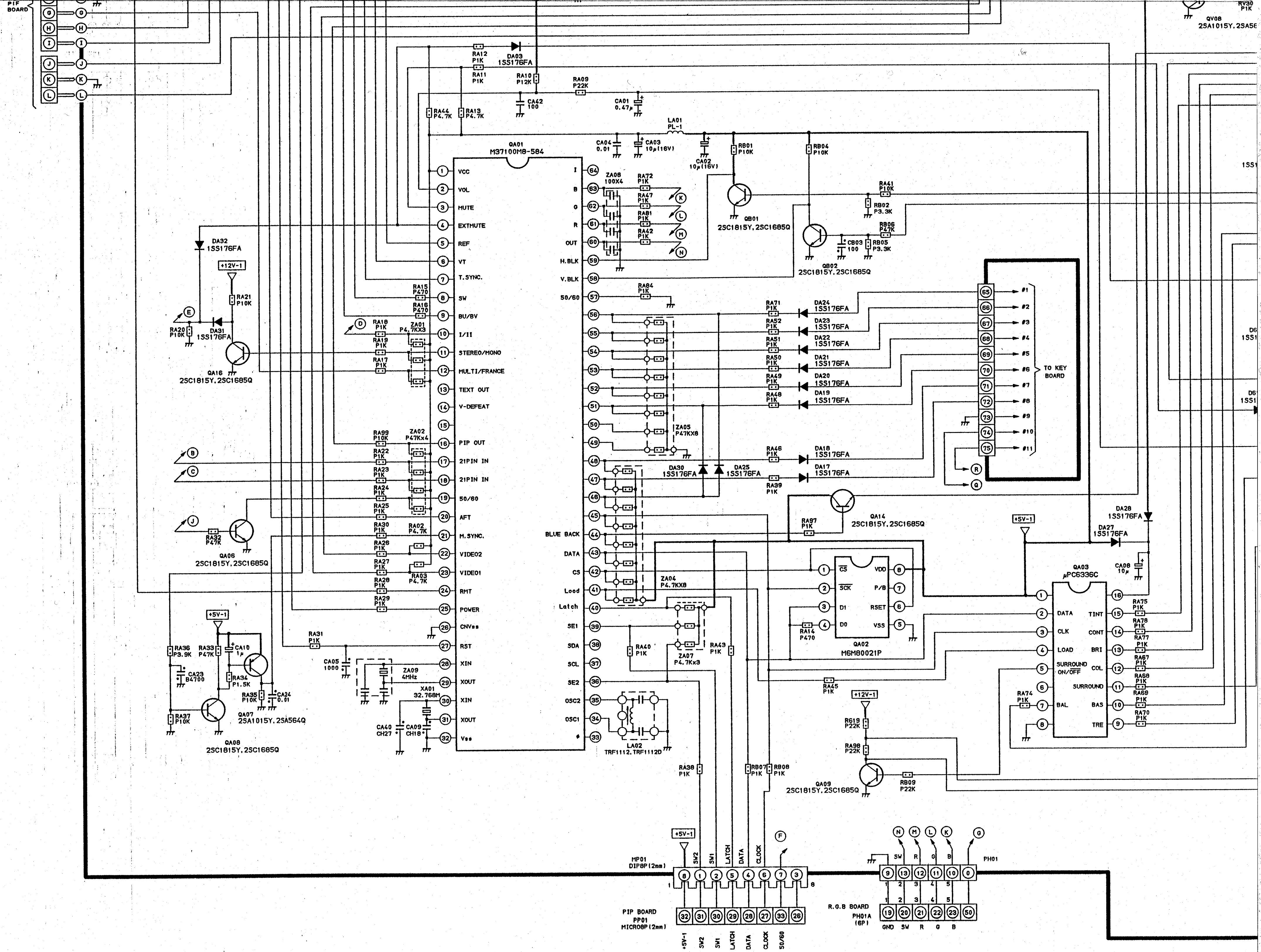
QA13
2SA1015Y,2SA564Q
RA59
P1K
CA61
1000
RA92
P10K
RA91
P3.9K
CA36
B4700
CA35
560
CA34
1000
RA89
P56K
RA87
P560K
CA33
4700
RA86
P560
QA11
2SA1015Y,2SA564Q
RA90
P10K
TO PIF BOARD
RA12
P1K
DA03
1SS176FA
RA11
P1K
RA10
P12K
RA09
P22K
CA42
CA01
QV07
TA8720AN
VOUT
VCC
VCC
NC
CIN
Clamp
YIN
NC
LOUT
ROUT
COUT
GND
YOUT
MUTE
SW2
L
R
TV
LS
RS
SY
SC
LI
RI
EI
L2
R2
E2
SWI
RV04
P820
RV05
P1K
RV02
P820
VIDEO1
VIDEO2
RV09
P10K
RV13
P22K
RV14
P22K
RV18
P22K
QV01
2SC1815Y,2SC1685Q
DV01
1SS176FA
QV02
2SC1815Y,2SC1685Q
DV07
1SS176FA
RV17
P22K
RV20
P10K
RV21
P10K
RV40
P1K
QV08
2SA1015Y,2SA564
RV30
P1K

Electrolitic	⊣⊢
Electrolitic Non-Polar	⊣⊢
Variable Capacitor	⊣⊢
Other	⊣⊢


PIF BOARD
QA01
M37100M8-584
VCC
VOL
MUTE
EXTMUTE
REF
VT
T.SYNC.
SW
8V/9V
I/II
STEREO/MONO
MULTI/FRANCE
TEXT OUT
V-DEFEAT
PIP OUT
21PIN IN
50/60
AFT
M.SYNC.
VIDEO2
VIDEO1
RMT
POWER
CNVss
RST
XIN
XOUT
Vss
I
B
G
R
OUT
H.BLK
V.BLK
BLUE BACK
DATA
CS
Load
Latch
SE1
SDA
SCL
SE2
OSC2
OSC1
RA12 P1K
DA03 1SS176FA
RA11 P1K
RA10 P12K
RA09 P22K
CA42 100
CA01 0.47μ
RA44 P4.7K
RA13 P4.7K
LA01 PL-1
CA04 0.01
CA03 10μ(16V)
CA02 10μ(16V)
RB01 P10K
RB04 P10K
ZA08 100X4
RA72 P1K
RA47 P1K
RA81 P1K
RA42 P1K
QB01 2SC1815Y,2SC1685Q
RA41 P10K
RB02 P3.3K
RB06 P47K
CB03 100
RB05 P3.3K
QB02 2SC1815Y,2SC1685Q
DA32 1SS176FA
+12V-1
RA21 P10K
RA20 P10K
DA31 1SS176FA
QA16 2SC1815Y,2SC1685Q
RA15 P470
RA16 P470
RA18 P1K
RA19 P1K
ZA01 P4.7KX3
RA17 P1K
RA84 P1K
RA71 P1K
DA24 1SS176FA
RA52 P1K
DA23 1SS176FA
RA51 P1K
DA22 1SS176FA
RA50 P1K
DA21 1SS176FA
RA49 P1K
DA20 1SS176FA
RA48 P1K
DA19 1SS176FA
ZA05 P47KX8
RA46 P1K
DA18 1SS176FA
DA30 1SS176FA
DA25 1SS176FA
DA17 1SS176FA
RA39 P1K
TO KEY BOARD
#1 #2 #3 #4 #5 #6 #7 #8 #9 #10 #11
RA99 P10K
ZA02 P47Kx4
RA22 P1K
RA23 P1K
RA24 P1K
RA25 P1K
RA30 P1K
RA02 P4.7K
RA32 P47K
QA06 2SC1815Y,2SC1685Q
RA26 P1K
RA27 P1K
RA28 P1K
RA03 P4.7K
RA29 P1K
QA14 2SC1815Y,2SC1685Q
RA97 P1K
+5V-1
DA28 1SS176FA
DA27 1SS176FA
CA08 10μ
ZA04 P4.7KX8
QA02 M6M80021P
CS SCK DI DO VDD P/B RSET VSS
RA14 P470
QA03 μPC6336C
DATA CLK LOAD SURROUND ON/OFF BAL TINT CONT BRI COL SURROUND BAS TRE
RA75 P1K
RA78 P1K
RA77 P1K
RA67 P1K
RA68 P1K
RA69 P1K
RA70 P1K
RA74 P1K
RA31 P1K
CA05 1000
ZA09 4MHz
XA01 32.768M
CA40 CH27
CA09 CH18
RA40 P1K
ZA07 P4.7Kx3
RA43 P1K
LA02 TRF1112,TRF1112D
RA45 P1K
+12V-1
R619 P22K
RA98 P22K
QA09 2SC1815Y,2SC1685Q
RB09 P22K
RA38 P1K
RB07 P1K
RB08 P1K
RA36 P3.9K
RA33 P47K
CA10 1μ
RA34 P1.5K
CA23 B4700
RA35 P10K
CA24 0.01
RA37 P10K
QA07 2SA1015Y,2SA564Q
QA08 2SC1815Y,2SC1685Q
MP01 DIP8P(2mm)
+5V-1 SW2 SW1 LATCH DATA CLOCK
PIP BOARD PP01 MICRO8P(2mm)
+5V-1 SW2 SW1 LATCH DATA CLOCK 50/60
SW R G B
PH01
R.G.B BOARD PH01A (6P)
GND SW R G B
RV30 P1K
QV08 2SA1015Y,2SA56
1SS1
D6 1SS1
D6 1SS1
B C D E F G H I J K L M N Q R

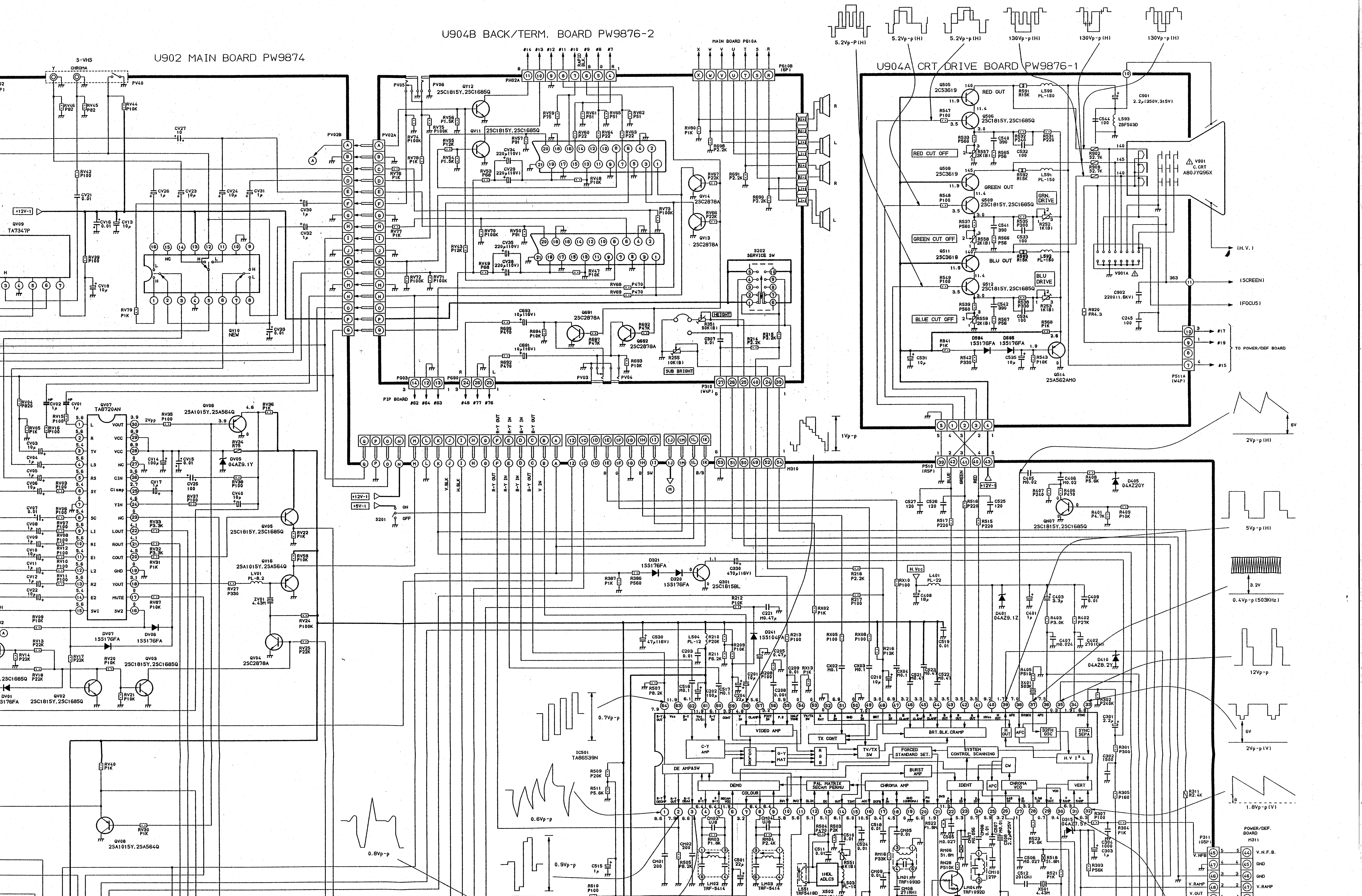
1

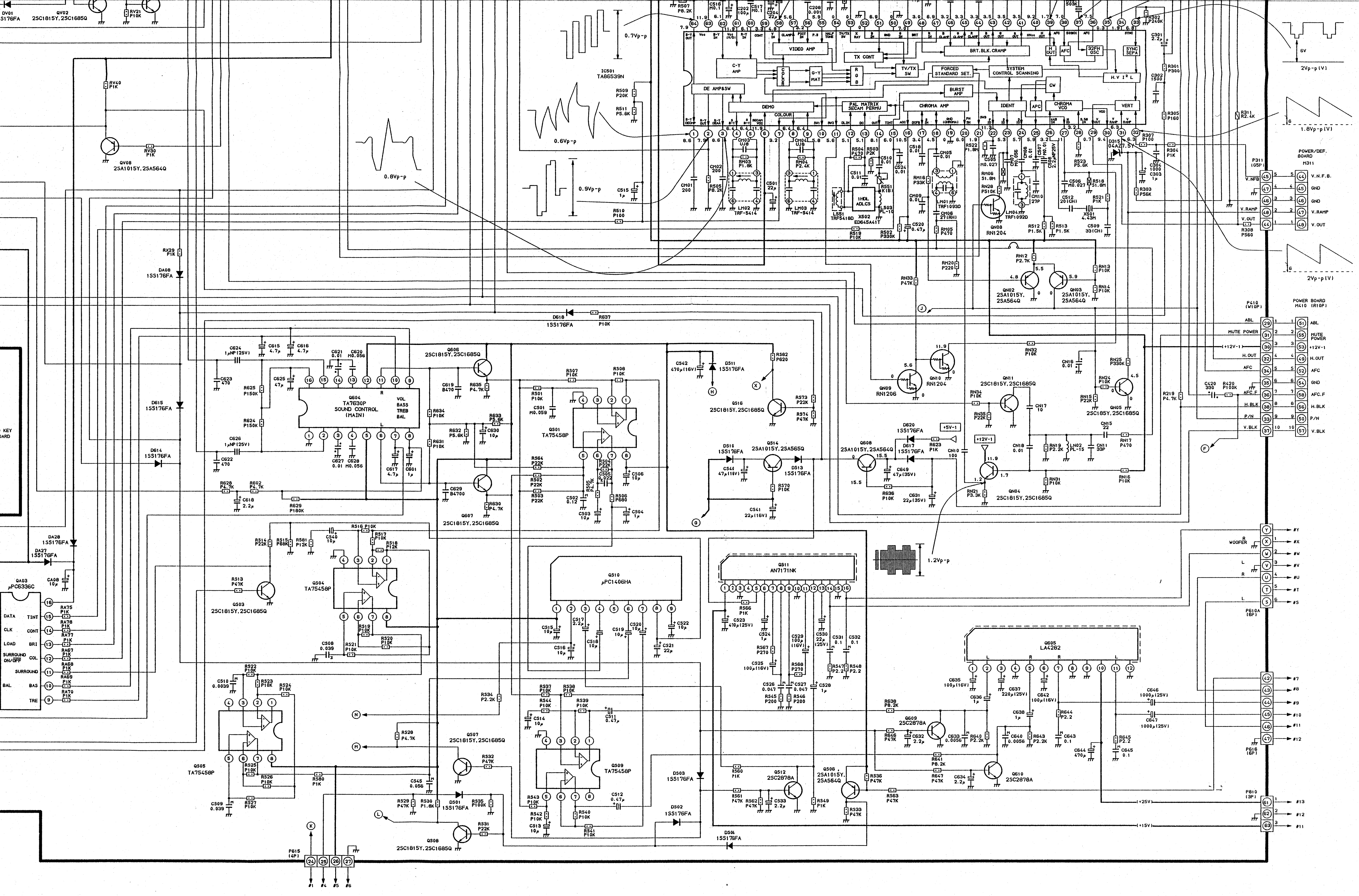
Electrolitic	⊣⊢
Electrolitic Non-Polar	⊣⊢
Variable Capacitor	⊣⊢
Other	⊣⊢



PIF BOARD
QA01 M37100M8-584
VCC
VOL
MUTE
EXTMUTE
REF
VT
T.SYNC.
SW
BU/BV
I/II
STEREO/MONO
MULTI/FRANCE
TEXT OUT
V-DEFEAT
PIP OUT
21PIN IN
21PIN IN
50/60
AFT
H.SYNC.
VIDEO2
VIDEO1
RMT
POWER
CNVss
RST
XIN
XOUT
XIN
XOUT
Vss
I
B
G
R
OUT
H.BLK
V.BLK
50/60
BLUE BACK
DATA
CS
Load
Latch
SE1
SDA
SCL
SE2
OSC2
OSC1
DA03 1SS176FA
DA32 1SS176FA
DA31 1SS176FA
QA16 2SC1815Y,2SC1685Q
QA06 2SC1815Y,2SC1685Q
QA07 2SA1015Y,2SA564Q
QA08 2SC1815Y,2SC1685Q
QB01 2SC1815Y,2SC1685Q
QB02 2SC1815Y,2SC1685Q
QA14 2SC1815Y,2SC1685Q
QA09 2SC1815Y,2SC1685Q
QV08 2SA1015Y,2SA56
ZA09 4MHz
XA01 32.768M
LA01 PL-1
LA02 TRF1112,TRF1112D
ZA08 100X4
ZA01 P4.7KX3
ZA02 P47Kx4
ZA04 P4.7KX8
ZA05 P47KX8
ZA07 P4.7Kx3
DA24 1SS176FA
DA23 1SS176FA
DA22 1SS176FA
DA21 1SS176FA
DA20 1SS176FA
DA19 1SS176FA
DA18 1SS176FA
DA17 1SS176FA
DA30 1SS176FA
DA25 1SS176FA
DA28 1SS176FA
DA27 1SS176FA
TO KEY BOARD
#1 #2 #3 #4 #5 #6 #7 #8 #9 #10 #11
QA02 M6M80021P
CS
SCK
DI
DO
VDD
P/B
RSET
VSS
QA03 μPC6336C
DATA
CLK
LOAD
SURROUND ON/OFF
BAL
TINT
CONT
BRI
COL
SURROUND
BAS
TRE
+12V-1
+5V-1
MP01 DIP8P(2mm)
SV2
SV1
LATCH
DATA
CLOCK
PIP BOARD PP01 MICRO8P(2mm)
+5V-1
SV2
SV1
LATCH
DATA
CLOCK
50/60
SW
R
G
B
PH01
R.G.B BOARD PH01A (6P)
GND
SW
R
G
B

1


U902 MAIN BOARD PW9874
U904B BACK/TERM. BOARD PW9876-2
U904A CRT DRIVE BOARD PW9876-1
S-VHS
PIP BOARD
MAIN BOARD P610A
S202 SERVICE SW
HEIGHT
SUB BRIGHT
RED CUT OFF
GREEN CUT OFF
BLUE CUT OFF
GRN. DRIVE
BLU DRIVE
RED OUT
GREEN OUT
BLU OUT
V901 C.CRT A80JYQ96X
(H.V.)
(SCREEN)
(FOCUS)
TO POWER/DEF BOARD
POWER/DEF. BOARD
QV09 TA7347P
QV07 TA8720AN
IC501 TA8653ON
5.2Vp-p(H)
130Vp-p(H)
1Vp-p
6V
2Vp-p(H)
5Vp-p(H)
0.4Vp-p(503KHz)
12Vp-p
2Vp-p(V)
1.8Vp-p(V)
0.7Vp-p
0.6Vp-p
0.8Vp-p
0.9Vp-p
VIDEO AMP
C-Y AMP
TX CONT
TV/TX SW
BRT.BLK.CRAMP
FORCED STANDARD SET.
SYSTEM CONTROL SCANNING
DE AMP&SW
DEMO
COLOUR
PAL MATRIX SECAM PERMU
CHROMA AMP
BURST AMP
IDENT
APC
CHROMA VCO
VERT
H.V I²L
SYNC SEPA
32FH OSC
AFC
H OUT
V.NFB
GND
V.RAMP
V.OUT


IC501
TA8653ON
VIDEO AMP
TX CONT
BRT.BLK.CRAMP
C-Y AMP
G-Y MAT
TV/TX SW
FORCED STANDARD SET.
SYSTEM CONTROL SCANNING
H OUT
AFC
32FH OSC
SYNC SEPA
DE AMP&SW
DEMO
COLOUR
PAL MATRIX SECAM PERMU
CHROMA AMP
BURST AMP
IDENT
APC
CW
CHROMA VCO
VERT
H.V I2 L
0.7Vp-p
0.6Vp-p
0.9Vp-p
0.8Vp-p
6V
2Vp-p(V)
1.8Vp-p(V)
2Vp-p(V)
1.2Vp-p
QV01
QV02
2SC1815Y,2SC1685Q
QV08
2SA1015Y,2SA564Q
RV40 P1K
RV30 P1K
RX29 P1K
DA08 1SS176FA
D615 1SS176FA
D614 1SS176FA
DA28 1SS176FA
DA27 1SS176FA
QA03
μPC6336C
DATA
CLK
LOAD
SURROUND ON/OFF
BAL
TINT
CONT
BRI
COL
SURROUND
BAS
TRE
LH02 TRF-5414
LH03 TRF-5414
1HDL ADLCS
X502 ED645A41T
L551 TRF5416D
LH01 TRF1093D
LH04 TRF1092D
QN08 RN1204
XS01 4.43M
D315 04AZ7.5Y
P311 (G5P)
POWER/DEF. BOARD
M311
V.NFB
GND
V.RAMP
V.OUT
R308 P560
QN02 2SA1015Y, 2SA564Q
QN03 2SA1015Y, 2SA564Q
QN09 RN1206
QN10 RN1204
QN11 2SC1815Y,2SC1685Q
QN05 2SC185Y,2SC1685Q
QN04 2SC1815Y,2SC1685Q
P410 (W10P)
POWER BOARD M410 (R10P)
ABL
MUTE POWER
(+12V-1)
H.OUT
AFC
GND
AFC.F
H.BLK
P/N
V.BLK
Q604
TA7630P
SOUND CONTROL (MAIN)
VOL
BASS
TREB
BAL
Q606 2SC1815Y,2SC1685Q
Q607 2SC1815Y,2SC1685Q
D618 1SS176FA
R637 P10K
Q501 TA75458P
Q516 2SC1815Y,2SC1685Q
D511 1SS176FA
D516 1SS176FA
Q514 2SA1015Y,2SA565Q
D513 1SS176FA
Q608 2SA1015Y,2SA564Q
D620 1SS176FA
D617 1SS176FA
+5V-1
+12V-1
Q503 2SC1815Y,2SC1685Q
Q504 TA75458P
Q510 μPC1406HA
Q511 AN7171NK
Q505 TA75458P
Q509 TA75458P
Q507 2SC1815Y,2SC1685Q
Q508 2SC1815Y,2SC1685Q
D501 1SS176FA
D503 1SS176FA
D502 1SS176FA
D504 1SS176FA
Q512 2SC2878A
Q506 2SA1015Y, 2SA564Q
Q605 LA4282
Q609 2SC2878A
Q610 2SC2878A
WOOFER
L
R
P610A (6P)
P616 (6P)
P810 (3P)
(+25V)
(+15V)
P615 (4P)
#1 #4 #5 #6
#Y #X #W #V #U #T #S
#7 #8 #9 #10 #11 #12
#13 #12 #11

SCHEMATIC DIAGRAM MODEL 349P9F (2/4)

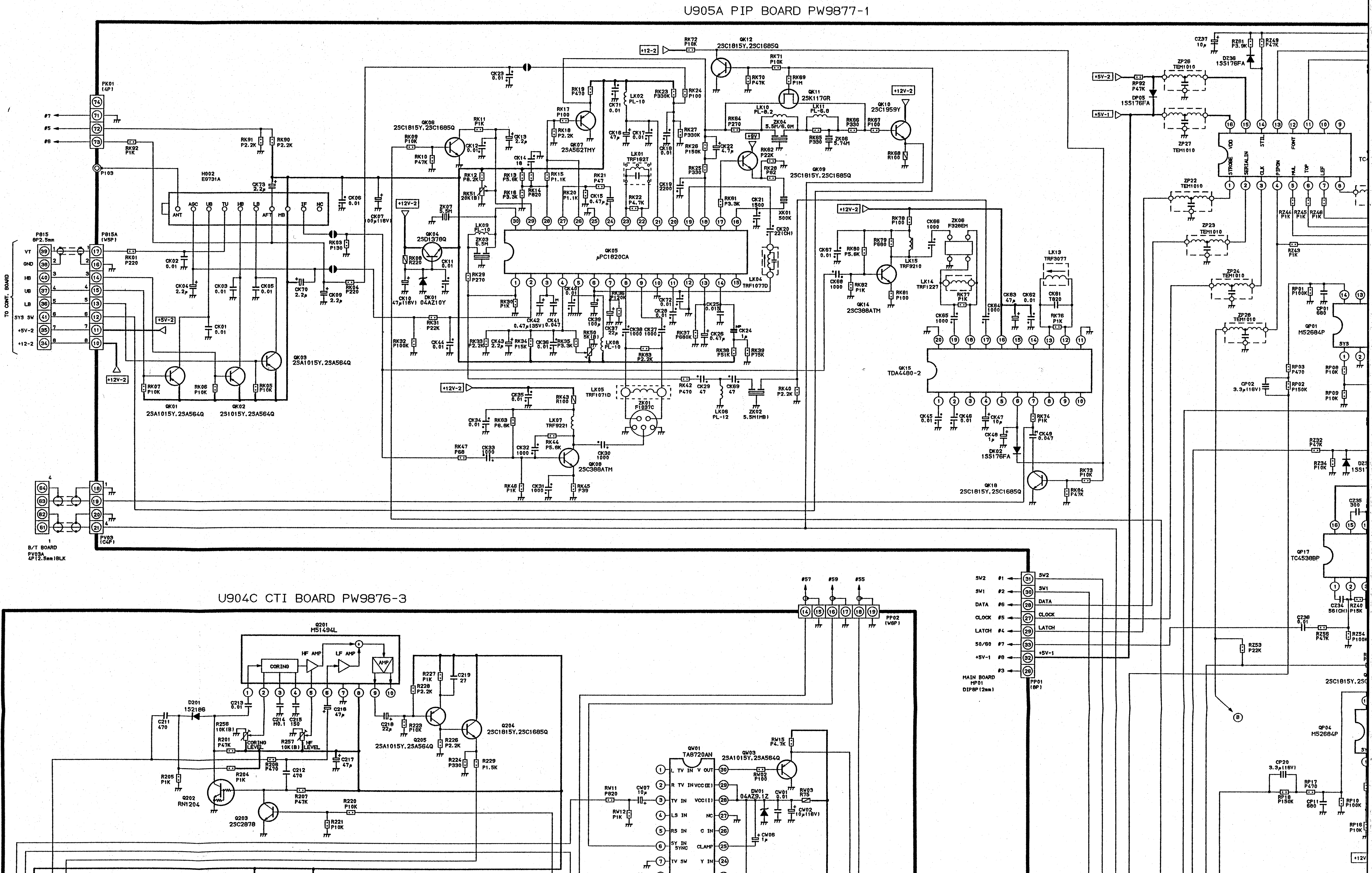
NOTE: The parts identified by the international hazard symbols are critical for safety. Replace only with part number specified.

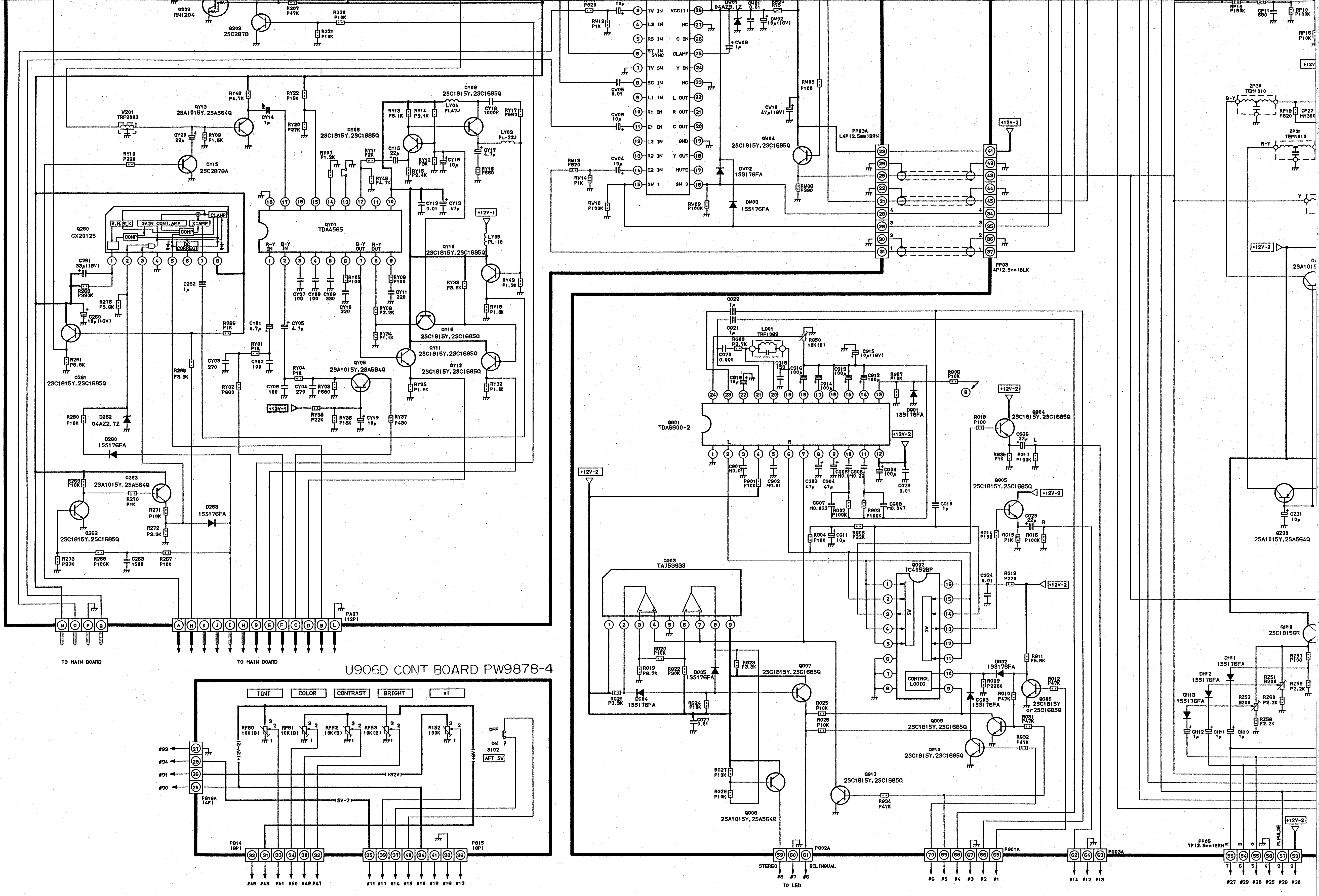
OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal.
2. Voltages reading may vary ±20%.
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe
5. Check FINE TUNING, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position.
6. Waveforms are taken using a standard colour bar signal.

NOTES:

1. D.C. resistance value of a principal tran
gram. These are measured for separated t
2. The circuits are subject to change withou
3. ⊖ : Solder links.


U905A PIP BOARD PW9877-1
U904C CTI BOARD PW9876-3
QK05 μPC1820CA
QK15 TDA4480-2
H002 E0731A
Q201 M51494L
QV01 TA8720AN
QP01 M52684P
QP04 M52684P
QP17 TC4538BP
ZK01 F1037C
TO CONT. BOARD
B/T BOARD
MAIN BOARD
CORING
HF AMP
LF AMP
AMP
CORING LEVEL
HF LEVEL
+12V-2
+5V-2
+5V-1


Q202 RN1204
Q203 2SC2878
QY13 2SA1015Y,2SA564Q
QY15 2SC2878A
W201 TRF2083
QY09 2SC1815Y,2SC1685Q
QY08 2SC1815Y,2SC1685Q
QY01 TDA4565
Q260 CX20125
V.H.BLK
GAIN CONT.AMP
X.AMP
CLAMP
COMP
CONT
CORRECT
Q261 2SC1815Y,2SC1685Q
QY10 2SC1815Y,2SC1685Q
QY16 2SC1815Y,2SC1685Q
QY11 2SC1815Y,2SC1685Q
QY12 2SC1815Y,2SC1685Q
QY05 2SA1015Y,2SA564Q
D262 04AZ2.7Z
D260 1SS176FA
Q263 2SA1015Y,2SA564Q
Q262 2SC1815Y,2SC1685Q
D263 1SS176FA
+12V-1
PA07 (12P)
TO MAIN BOARD
TO MAIN BOARD
TINT
COLOR
CONTRAST
BRIGHT
VT
RP50 10K(B)
RP51 10K(B)
RP52 10K(B)
RP53 10K(B)
R152 100K
OFF
ON
S102
AFT SW
+12V-2
+32V
+9V1
(5V-2)
P816A (4P)
P814 (6P)
P815 (8P)
#93
#94
#91
#90
#46 #48 #51 #50 #49 #47
#11 #17 #14 #15 #10 #13 #16 #12
TV IN
LS IN
RS IN
SY IN SYNC
TV SW
SC IN
L1 IN
R1 IN
E1 IN
L2 IN
R2 IN
E2 IN
SW 1
VCC(1)
NC
C IN
CLAMP
Y IN
L OUT
R OUT
C OUT
GND
Y OUT
MUTE
SW 2
DW01 04AZ9.1Z
DW02 1SS176FA
DW03 1SS176FA
QW04 2SC1815Y,2SC1685Q
PP03A L4P(2.5mm)BRN
PP03 4P(2.5mm)BLK
QZ30 2SA1015Y,2SA564Q
ZP30 TEH1010
ZP31 TEH1010
B-Y
R-Y
Y
Q001 TDA6600-2
L001 TRF1082
Q004 2SC1815Y,2SC1685Q
Q005 2SC1815Y,2SC1685Q
Q003 TA7539S
Q002 TC4052BP
CONTROL LOGIC
D001 1SS176FA
D002 1SS176FA
D003 1SS176FA
D004 1SS176FA
D005 1SS176FA
Q006 2SC1815Y or 2SC1685Q
Q007 2SC1815Y,2SC1685Q
Q008 2SA1015Y,2SA564Q
Q009 2SC1815Y,2SC1685Q
Q010 2SC1815Y,2SC1685Q
Q012 2SC1815Y,2SC1685Q
QH10 2SC1815GR
DH11 1SS176FA
DH12 1SS176FA
DH13 1SS176FA
P002A
P001A
P003A
STEREO
BILINGUAL
TO LED
#8 #7 #6
#6 #5 #4 #3 #2 #1
#14 #12 #13
PP05 7P(2.5mm)BRN
H.PULSE
#27 #29 #28 #25 #26 #30

U906D CONT BOARD PW9878-4

3

e value of a principal transformer is shown in this schematic dia-
re measured for separated from the circuit.
e subject to change without notice.
inks.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

RESISTOR

Table 1

Type	Mark
Carbon Composition	S
Oxide Metal Film	R
Insulated Carbon Film	P
Wire Wound	W
Cement	No Mark
Variable Resistor	-⧄-
Positive Thermistor	-⧄-
Negative Thermistor	-⊠-
Fusible Resistor	FR

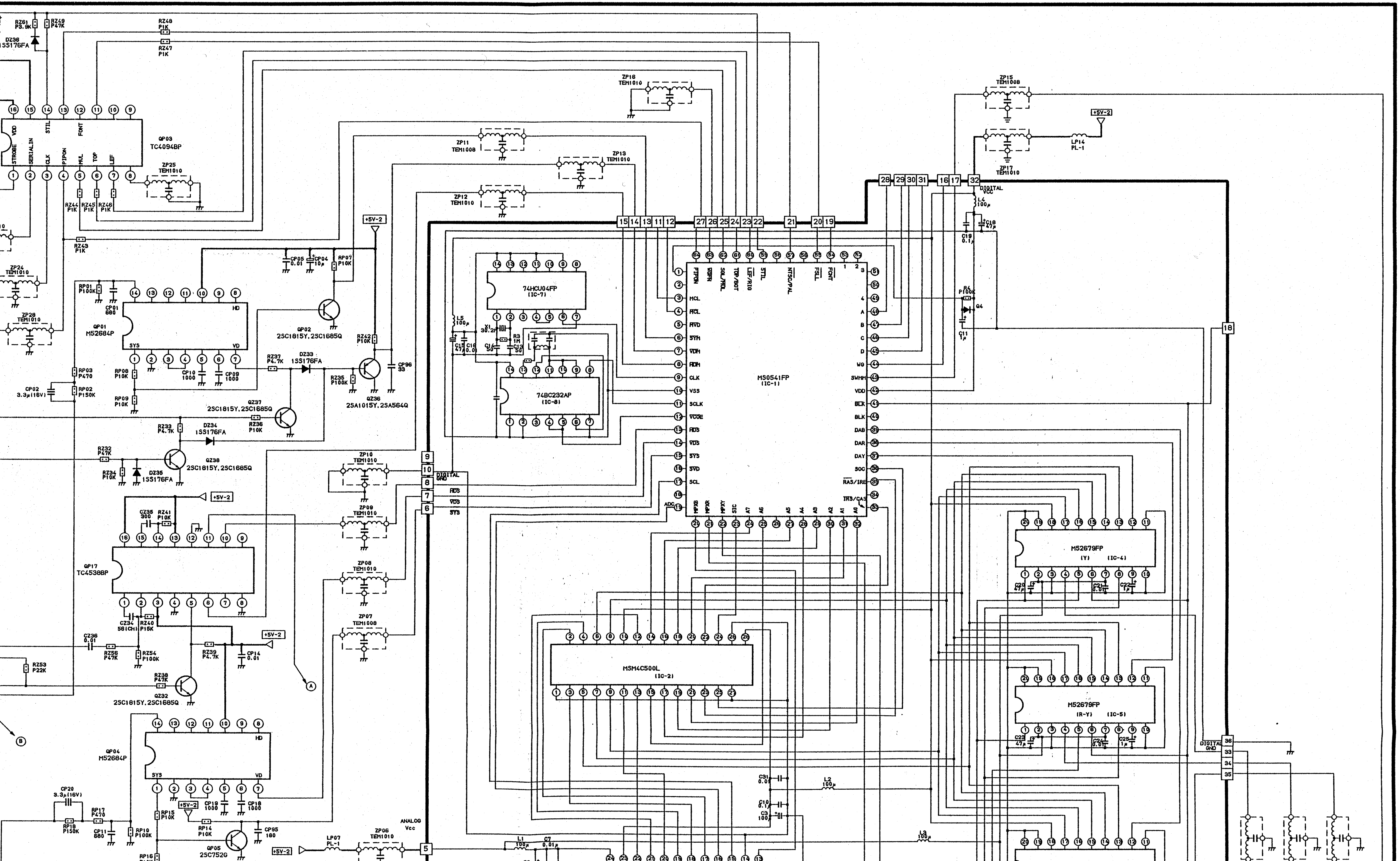
Table 2

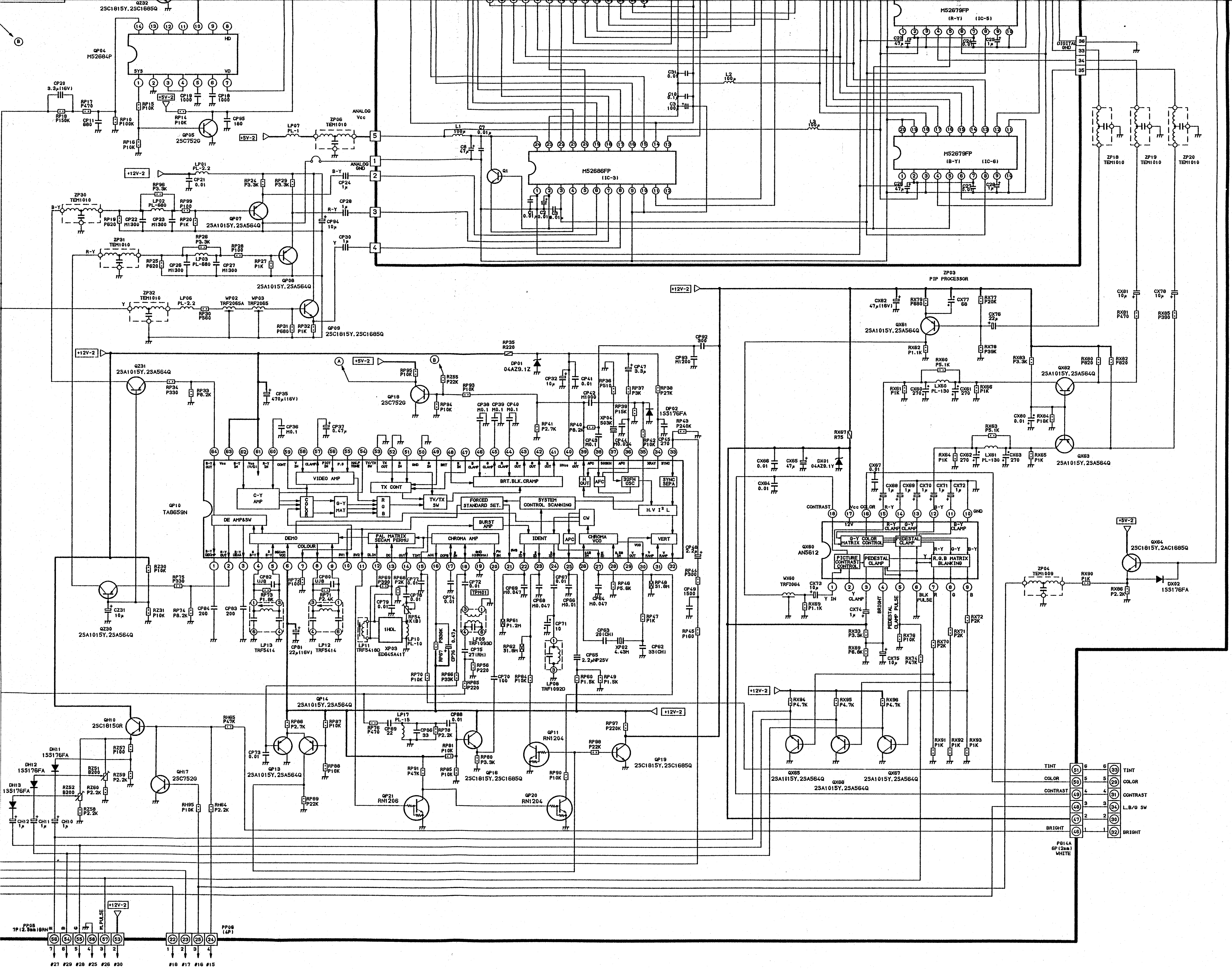
Watt	Mark	Watt	Mark
1/6 W	-[••]-	3 W	-[3]-
1/8 W	-[•]-	5 W	-[5]-
1/4 W	-⊠-	10 W	-[10]-
1/2 W	-⧄-	15 W	-[15]-
1 W	-[1]-	20 W	-[20]-
2 W	-[2]-	25 W	-[25]-

CAPACITOR

Table 3

Type	Mark
Ceramic Disc 50V Only	-‖-
Electrolitic	-‖-
Electrolitic Non-Polar	-‖-
Variable Capacitor	-‖-
Other	-‖-


QP03
TC4094BP
ZP25
TEM1010
STROBE
SERIALIN
CLK
PIPON
MUL
TOP
LEF
VDD
STIL
FONT
RZ48
P1K
RZ47
P1K
RZ49
P47K
RZ61
P5.6K
DZ36
1SS176FA
RZ44
P1K
RZ45
P1K
RZ46
P1K
RZ43
P1K
ZP24
TEM1010
ZP28
TEM1010
QP01
M52684P
RP01
P100K
CP01
680
RP03
P470
RP02
P150K
CP02
3.3μ(16V)
RP08
P10K
RP09
P10K
CP10
1000
CP09
1000
CP05
0.01
CP04
10μ
RP07
P10K
QP02
2SC1815Y,2SC1685Q
RZ37
P4.7K
DZ33
1SS176FA
RZ42
P10K
RZ35
P100K
QZ36
2SA1015Y,2SA564Q
CP96
33
QZ37
2SC1815Y,2SC1685Q
RZ33
P4.7K
DZ34
1SS176FA
RZ36
P10K
RZ32
P47K
RZ34
P10K
DZ35
1SS176FA
QZ38
2SC1815Y,2SC1685Q
+5V-2
CZ35
300
RZ41
P10K
QP17
TC4538BP
CZ34
56(CH)
RZ40
P15K
CZ36
0.01
RZ56
P47K
RZ54
P100K
RZ39
P4.7K
CP14
0.01
RZ53
P22K
RZ38
P47K
QZ32
2SC1815Y,2SC1685Q
QP04
M52684P
CP20
3.3μ(16V)
RP19
P150K
RP17
P470
CP11
680
RP10
P100K
RP15
P10K
RP14
P10K
CP19
1000
CP18
1000
QP05
2SC752G
CP95
180
RP16
ZP16
TEM1010
ZP11
TEM1008
ZP13
TEM1010
ZP12
TEM1010
ZP10
TEM1010
ZP09
TEM1010
ZP08
TEM1010
ZP07
TEM1008
ZP06
TEM1010
LP07
PL-1
ANALOG
Vcc
DIGITAL
GND
RDS
VDS
SYS
74HCU04FP
(IC-7)
74BC232AP
(IC-8)
L5
100μ
X1
32.2M
R3
1M
M50541FP
(IC-1)
PIPON
MUL
SOL/PAL
TOP/BOT
LEF/RIG
STIL
NTSC/PAL
FSEL
FONT
HCL
VCL
RVD
SYN
VDH
RDH
CLK
VSS
SCLK
VCDE
RDS
VDS
SYS
SVD
SCL
ADC
MPXB
MPXA
MPXY
SIC
A7
A6
A5
A4
A3
A2
A1
A0
WO
SWHM
VDD
BCK
BLK
DAB
DAR
DAY
SOC
RAS/IRE
IRS/CAS
DIGITAL
Vcc
L4
100μ
C18
47μ
C19
0.1
R4
P100K
Q4
C11
1μ
ZP15
TEM1008
ZP17
TEM1010
LP14
PL-1
M4C500L
(IC-2)
M52679FP
(Y)
(IC-4)
M52679FP
(R-Y)
(IC-5)
C20
47μ
C21
0.01
C22
1μ
C23
47μ
C24
0.01
C25
1μ
C31
0.01
L2
100μ
C10
0.1
C3
100
L1
100μ
C7
0.01μ
L3
100μ
DIGITAL
GND

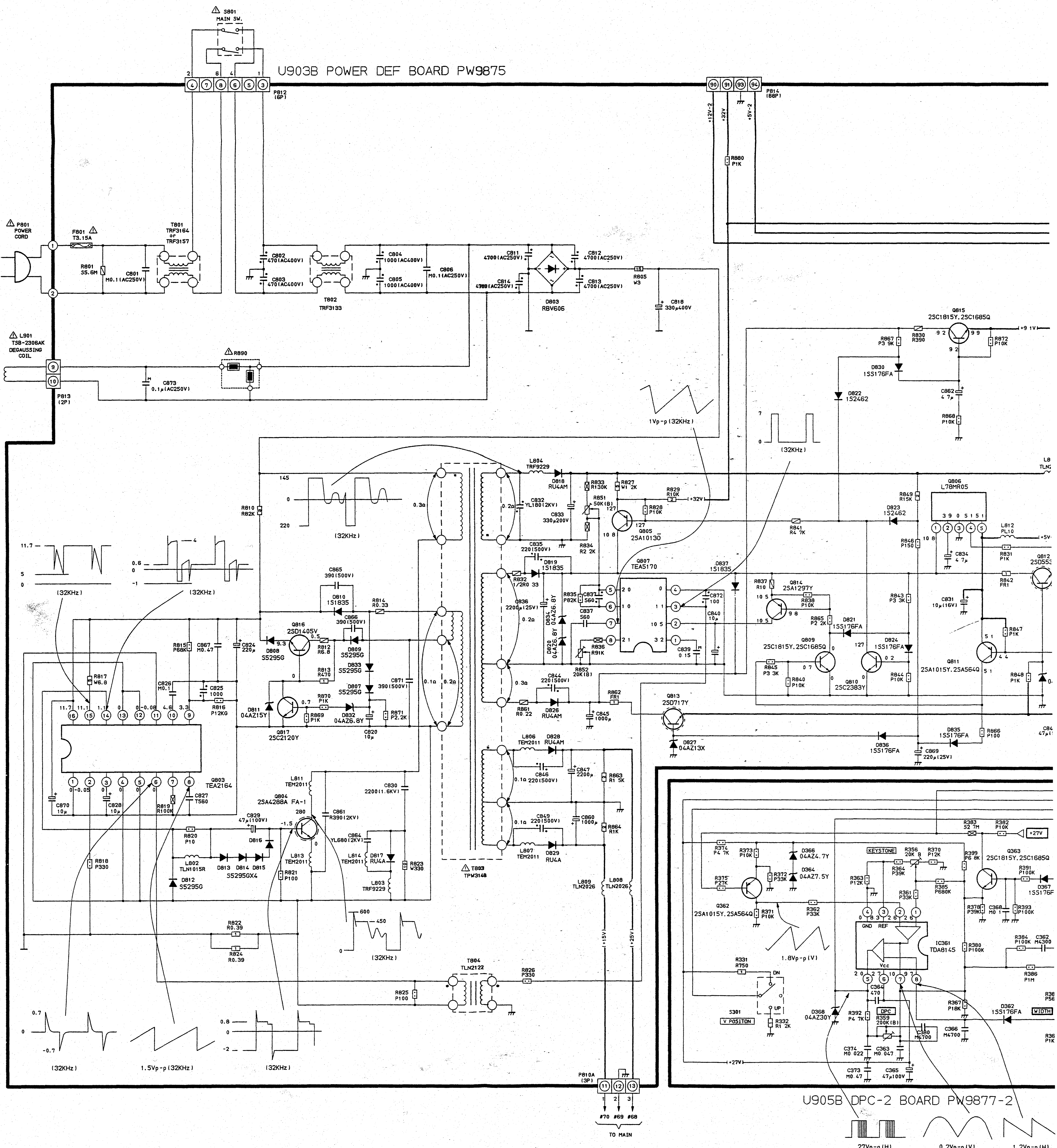


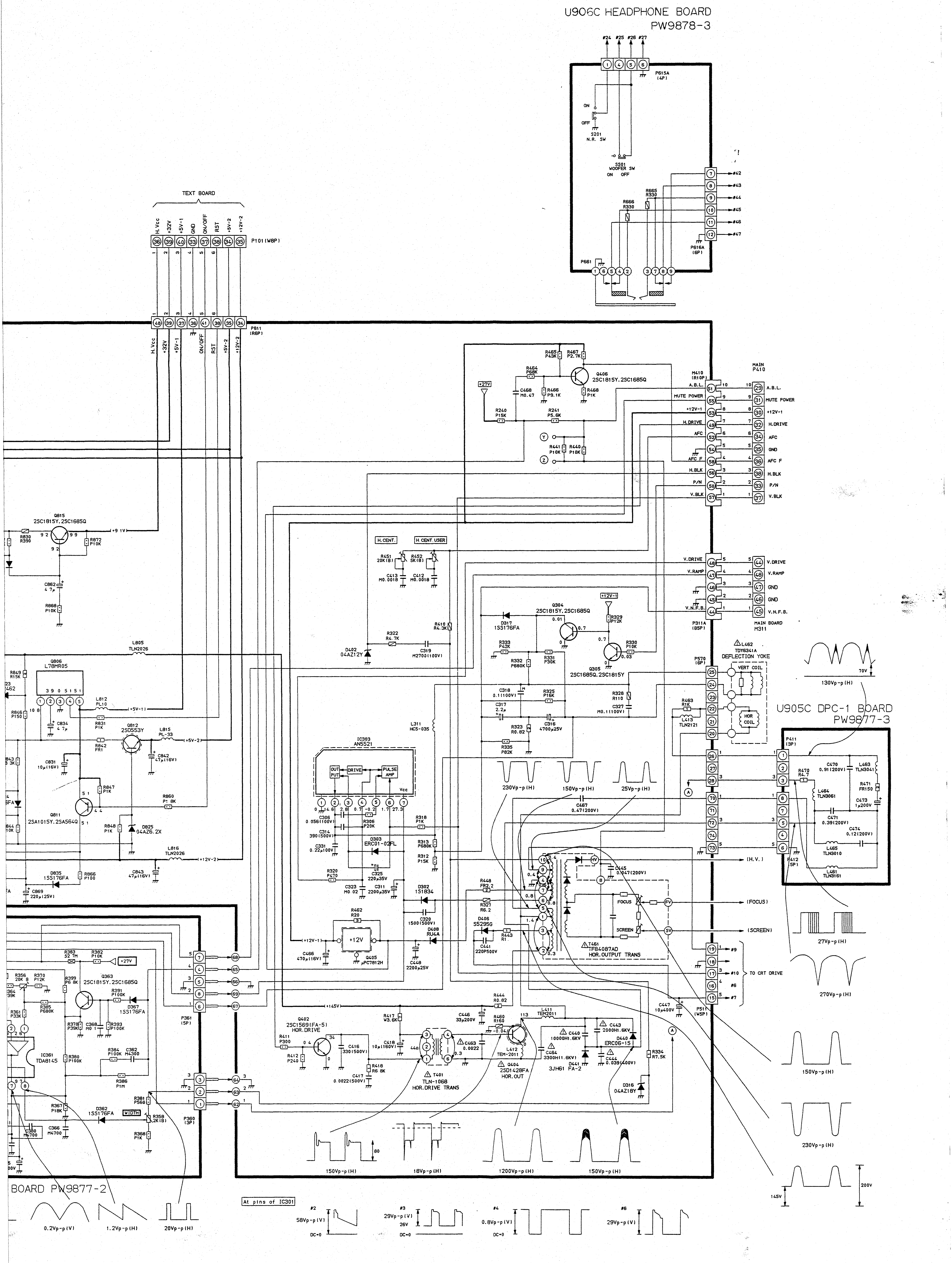
QP04
M52684P
M52686FP
(IC-3)
M52679FP
(R-Y) (IC-5)
M52679FP
(B-Y) (IC-6)
DIGITAL GND
ANALOG Vcc
ANALOG GND
QP10
TA8659N
QX60
AN5612
ZP03
PIP PROCESSOR
C-Y AMP
VIDEO AMP
TX CONT
TV/TX SW
BRT.BLK.CRAMP
FORCED STANDARD SET.
SYSTEM CONTROL SCANNING
DE AMP&SW
DEMO
COLOUR
PAL MATRIX SECAM PERMU
CHROMA AMP
BURST AMP
IDENT
APC
CHROMA VCO
CW
VERT
H.V I²L
SYNC SEPA
H OUT
AFC
32FH OSC
G-Y MAT
COLOR MATRIX CONTROL
PEDESTAL CLAMP
PICTURE CONTRAST CONTROL
R.G.B MATRIX BLANKING
R-Y CLAMP
G-Y CLAMP
B-Y CLAMP
+12V-2
+5V-2
QP05 2SC752G
QP07 25A1015Y,25A564Q
QP08 25A1015Y,25A564Q
QP09 2SC1815Y,2SC1685Q
QZ31 25A1015Y,25A564Q
QZ30 25A1015Y,25A564Q
QP18 2SC752G
QH10 2SC1815GR
QH17 2SC752G
QP13 25A1015Y,25A564Q
QP14 25A1015Y,25A564Q
QP16 2SC1815Y,2SC1685Q
QP11 RN1204
QP19 2SC1815Y,2SC1685Q
QP21 RN1206
QP20 RN1204
QX61 25A1015Y,25A564Q
QX62 25A1015Y,25A564Q
QX63 25A1015Y,25A564Q
QX64 2SC1815Y,2AC1685Q
QX65 25A1015Y,25A564Q
QX66 25A1015Y,25A564Q
QX67 25A1015Y,25A564Q
DP01 04AZ9.1Z
DP02 1SS176FA
DX01 04AZ9.1Y
DX02 1SS176FA
DH11 1SS176FA
DH12 1SS176FA
DH13 1SS176FA
XP03 ED845A41T
1HDL
ZP18 TEM1010
ZP19 TEM1010
ZP20 TEM1010
ZP04 TEM1009
ZP30 TEM1010
ZP31 TEM1010
ZP32 TEM1010
ZP06 TEM1010
LP13 TRF5414
LP12 TRF5414
LP09 TRF1093D
LP08 TRF1092D
WX60 TRF2084
TINT
COLOR
CONTRAST
L.B/G SW
BRIGHT
P814A 6P(2mm) WHITE
PP05 7P(2.0mm)BRN
PP06 (4P)
H.PULSE
#27 #29 #28 #25 #26 #30
#18 #17 #16 #15

4

SCHEMATIC DIAGRAM MODEL 349P9F (3/4)

NOTE: The parts identified by the international hazard symbols are critical for safety. Replace only with part number specified.

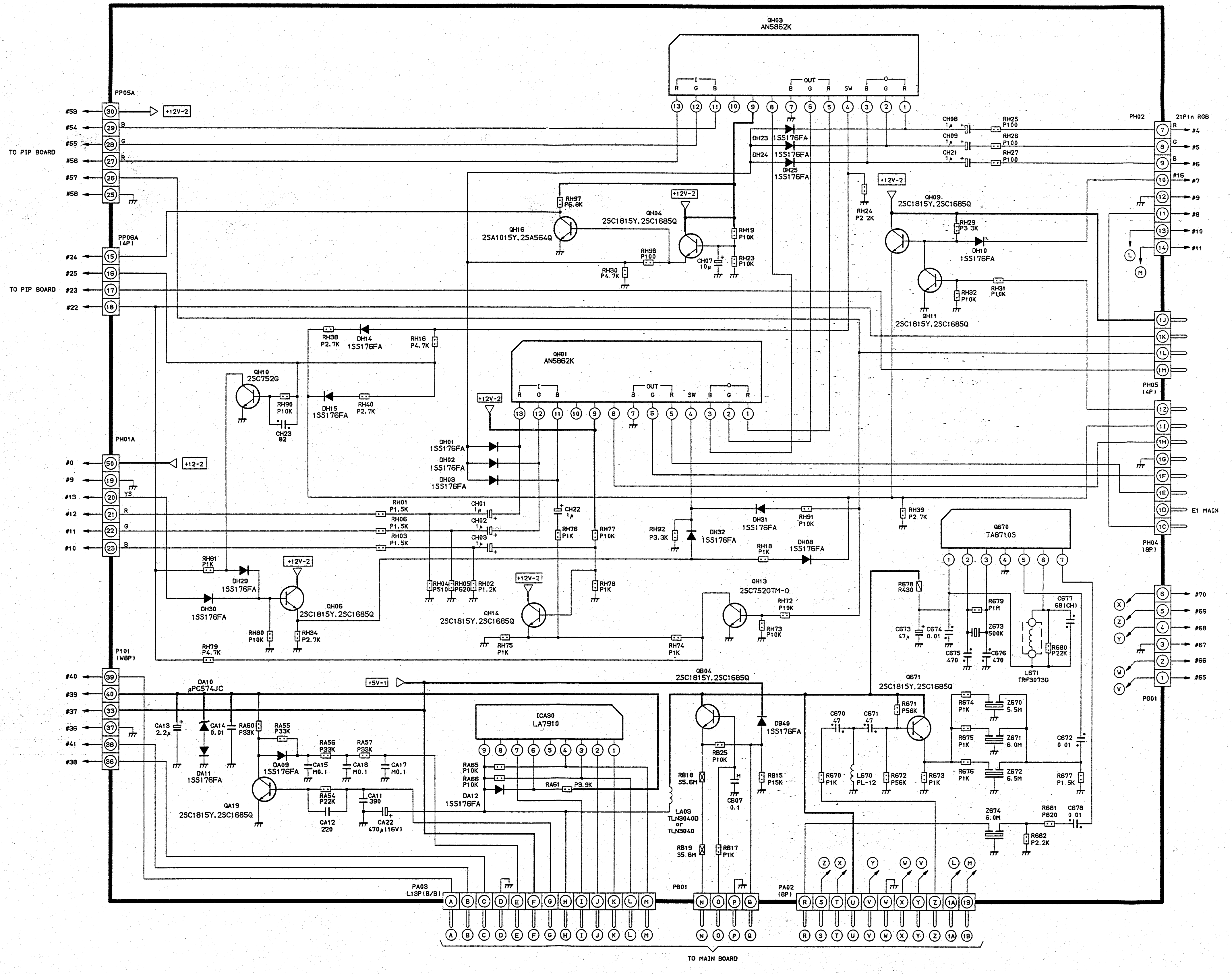

U903B POWER DEF BOARD PW9875
U905B DPC-2 BOARD PW9877-2
S801 MAIN SW.
P801 POWER CORD
F801 T3.15A
R801 S5.6M
C801 M0.1(AC250V)
T801 TRF3164 or TRF3157
C802 470(AC400V)
C803 470(AC400V)
T802 TRF3133
C804 1000(AC400V)
C805 1000(AC400V)
C806 M0.1(AC250V)
C811 4700(AC250V)
C812 4700(AC250V)
C813 4700(AC250V)
C814 4700(AC250V)
D803 RBV606
R805 W3
C818 330μ400V
L901 TSB-2306AK DEGAUSSING COIL
P813 (2P)
R890
C873 0.1μ(AC250V)
P812 (6P)
P814 (88P)
+12V-2
+32V
+5V-2
R880 P1K
Q815 2SC1815Y.2SC1685Q
R867 P3.9K
R830 R390
R872 P10K
D830 1SS176FA
D822 1S2462
C862 4.7μ
R868 P10K
1Vp-p(32KHz)
(32KHz)
L804 TRF9229
D818 RU4AM
R833 R130K
R827 W1.2K
R829 R10K
R851 50K(B)
R828 P10K
C832 YL180(2KV)
C833 330μ200V
Q805 2SA1013O
R834 R2.2K
C835 220(500V)
D819 1S1835
Q807 TEA5170
D837 1S1835
R832 1/2R0.33
C836 2200μ(25V)
D834 04AZ6.8Y
D820 04AZ6.8Y
R835 P82K
C837 560
R836 R91K
R852 20K(B)
C872 100
C840 10μ
C839 0.15
Q806 L78MR05
R849 R15K
D823 1S2462
R841 R4.7K
R846 P150
C834 4.7μ
L812 PL10
R831 P1K
R837 R10
Q814 2SA1297Y
R838 P10K
R843 P3.3K
C831 10μ(16V)
R865 P2.2K
D821 1SS176FA
Q809 2SC1815Y.2SC1685Q
R845 P3.3K
R840 P10K
Q810 2SC2383Y
D824 1SS176FA
R844 P10K
Q811 2SA1015Y.2SA564Q
R847 P1K
R848 P1K
R842 FR1
Q812 2SD553
R810 R82K
C865 390(500V)
D810 1S1835
R814 R0.33
C866 390(500V)
Q816 2SD1405V
R812 R6.8
D808 S5295G
D809 S5295G
R813 R470
D833 S5295G
R870 P1K
D807 S5295G
C871 390(500V)
D811 04AZ15Y
R869 P1K
D832 04AZ6.8Y
R871 P2.2K
Q817 2SC2120Y
C820 10μ
R815 P68K
C867 M0.47
C824 220μ
R817 W6.8
C826 M0.1
C825 1000
R816 P12KG
Q803 TEA2164
C870 10μ
C828 10μ
R819 R100K
C827 T560
C829 47μ(100V)
R820 P10
D816
L802 TLN1015R
D813 D814 D815 S5295GX4
D812 S5295G
R818 P330
Q804 2SA4288A FA-1
L811 TEM2011
C830 2200(1.6KV)
C861 R390(2KV)
C864 YL680(2KV)
L813 TEM2011
L814 TEM2011
D817 RU4A
R821 P100
R823 W330
L803 TRF9229
T803 TPW3148
R822 R0.39
R824 R0.39
T804 TLN2122
R826 P330
R825 P100
R861 R0.22
D826 RU4AM
C844 220(500V)
R862 FR1
C845 1000μ
Q813 2SD717Y
D827 04AZ13X
D835 1SS176FA
D836 1SS176FA
R866 P100
C869 220μ(25V)
L806 TEM2011
D828 RU4AM
C846 220(500V)
C847 2200μ
R863 R1.5K
C849 220(500V)
C860 1000μ
R864 R1K
L807 TEM2011
D829 RU4A
L809 TLN2026
L808 TLN2026
(+15V)
(+25V)
P810A (3P)
#70 #69 #68
TO MAIN
R383 S2.7M
R382 P10K
+27V
R374 P4.7K
R373 P10K
D366 04AZ4.7Y
KEYSTONE
R356 20K B
R370 P12K
R399 P6.8K
Q363 2SC1815Y.2SC1685Q
R391 P100K
D367 1SS176FA
R375 P27K
R372 P33K
D364 04AZ7.5Y
R363 P12K
R364 P39K
R385 P680K
R361 P33K
R378 P39K
C368 M0.1
R393 P100K
Q362 2SA1015Y.2SA564Q
R371 P10K
R362 P33K
GND REF
IC361 TDA8145
R380 P100K
R384 P100K
C362 M4300
1.8Vp-p(V)
R331 R750
DN
UP
S301 V POSITON
R332 R1.2K
Vcc
C364 470
R386 P1M
D368 04AZ30Y
R392 P4.7K
DPC
R359 200K(B)
C380 M4700
R367 P18K
D362 1SS176FA
WIDTH
C366 M4700
C374 M0.022
C363 M0.047
C373 M0.47
C365 47μ100V
(+27V)
11.7
5
0
0.6
-1
0.7
-0.7
0.8
-2
145
220
600
450
0.3a
0.2a
0.1a
1.5Vp-p(32KHz)
27Vp-p(H)
0.2Vp-p(V)
1.2Vp-p(H)


U906C HEADPHONE BOARD
PW9878-3
#24 #25 #26 #27
P615A (4P)
ON
OFF
S201 N.R. SW
S501 WOOFER SW
ON OFF
R665 R330
R666 R330
#42
#43
#44
#45
#46
#47
P616A (6P)
P661
TEXT BOARD
H.Vcc
+32V
+5V-1
GND
ON/OFF
RST
+5V-2
+12V-2
P101 (W8P)
P811 (R6P)
R465 P43K
R467 P2.7K
R464 P68K
Q406 2SC1815Y, 2SC1685Q
C468 M0.47
R466 P9.1K
R468 P1K
+27V
R240 P15K
R241 P5.6K
R441 P10K
R440 P10K
M410 (R10P)
A.B.L.
MUTE POWER
+12V-1
H.DRIVE
AFC
GND
AFC F
H.BLK
P/N
V.BLK
MAIN P410
Q815 2SC1815Y, 2SC1685Q
R830 R390
R872 P10K
C862 4.7μ
R868 P10K
+9.1V
H.CENT.
H.CENT.USER
R451 20K(B)
R452 5K(B)
C413 M0.0018
C412 M0.0018
R410 R4.3K
R322 R4.7K
C319 M2700(100V)
D402 04AZ12Y
V.DRIVE
V.RAMP
V.N.F.B.
P311A (B5P)
MAIN BOARD M311
+12V-1
Q304 2SC1815Y, 2SC1685Q
D317 1SS176FA
R329 P12K
R333 P43K
R330 P10K
R332 P680K
R331 P30K
Q305 2SC1685Q, 2SC1815Y
C318 0.1(100V)
R325 P16K
C317 2.2μ
C316 4700μ25V
R323 R0.82
R335 P82K
R328 R110
C327 M0.1(100V)
L805 TLN2026
Q806 L78MR05
R849 R15K
R846 P150
L812 PL10
C834 4.7μ
R831 P1K
R842 FR1
Q812 2SD553Y
L815 PL-33
C842 47μ(16V)
C831 10μ(16V)
R847 P1K
R860 P1.8K
Q811 2SA1015Y, 2SA564Q
R848 P1K
D825 04AZ6.2X
L816 TLN2026
D835 1SS176FA
R866 P100
C843 47μ(16V)
C869 220μ(25V)
+5V-1
+5V-2
+12V-2
L311 HC5-035
IC303 AN5521
OUT PUT
DRIVE
PULSE AMP
Vcc
C306 0.056(100V)
R306 P20K
C314 390(500V)
D303 ERC01-02FL
C331 0.22μ(100V)
R318 P1K
R313 P680K
R312 P15K
R320 P470
C325 220μ35V
C323 M0.02
C311 2200μ35V
D302 1S1834
C320 1500(500V)
R462 R20
+12V
Q405 μPC7812H
C466 470μ(16V)
D408 RU4A
C448 2200μ25V
+12V-1
P570 (6P)
⚠L462 TDY6341A DEFLECTION YOKE
VERT COIL
HOR COIL
R463 R1K
L413 TLN2121
130Vp-p(H)
70V
U905C DPC-1 BOARD
PW9877-3
P411 (3P)
R470 R4.7
C470 0.91(200V)
L463 TLN3041
L464 TLN3061
R471 FR150
C473 1μ200V
C471 0.39(200V)
C474 0.12(200V)
L465 TLN3010
L461 TLN3161
P412 (5P)
230Vp-p(H)
150Vp-p(H)
25Vp-p(H)
C467 0.47(200V)
(H.V.)
C445 0.047(200V)
HV
R448 FR2.2
R327 R6.2
D406 S5295G
R443 R1
C441 220P500V
FOCUS
SCREEN
FV
SV
(FOCUS)
(SCREEN)
⚠T461 TFB4087AD HOR.OUTPUT TRANS
27Vp-p(H)
#9
#10
#6
#7
TO CRT DRIVE
C447 10μ400V
P511 (W5P)
270Vp-p(H)
R383 S2.7M
R382 P10K
+27V
R356 20K B
R370 P12K
R399 P6.8K
Q363 2SC1815Y, 2SC1685Q
R364 39K
R385 P680K
R391 P100K
D367 1SS176FA
R361 P33K
R378 P39K
C368 M0.1
R393 P100K
IC361 TDA8145
R380 P100K
R384 P100K
C362 M4300
R386 P1M
R381 P560
WIDTH
R358 2K(B)
R367 P18K
D362 1SS176FA
C380 M4700
C366 M4700
R368 P1K
P360 (3P)
P361 (5P)
(+145V)
R444 R0.82
Q402 2SC1569(FA-5) HOR.DRIVE
R411 P300
R412 P240
C416 330(500V)
R417 W3.6K
C418 10μ(160V)
R418 R6.8K
C417 0.0022(500V)
⚠T401 TLN-1068 HOR.DRIVE TRANS
C446 33μ200V
R460 R160
⚠C463 0.0022
L411 TEM2011
L412 TEM-2011
⚠Q404 2SD1428FA HOR.OUT
⚠C440 10000H1.6KV
⚠C443 2000H1.6KV
D440 ERC06-15
C464 3300H(1.6KV)
3JH61 FA-2
D441
⚠C444 0.039(400V)
R334 R7.5K
D316 04AZ18Y
150Vp-p(H)
18Vp-p(H)
1200Vp-p(H)
150Vp-p(H)
80
150Vp-p(H)
230Vp-p(H)
145V
200V
BOARD PW9877-2
0.2Vp-p(V)
1.2Vp-p(H)
20Vp-p(H)
At pins of IC301
#2
58Vp-p(V)
DC=0
#3
29Vp-p(V)
26V
DC=0
#4
0.8Vp-p(V)
DC=0
#6
29Vp-p(V)

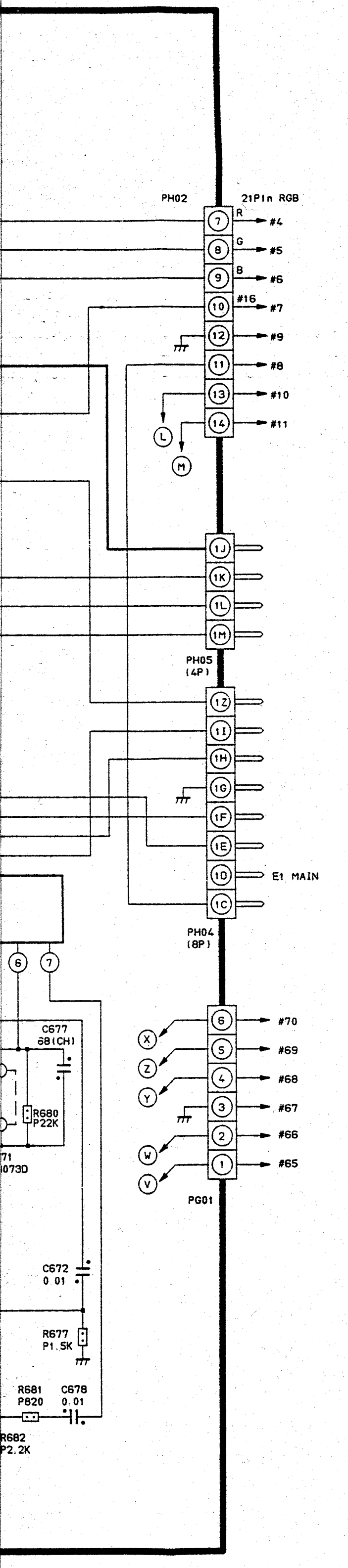
SCHEMATIC DIAGRAM MODEL 349P9F (4/4)

NOTE: The parts identified by the international hazard symbols are critical for safety. Replace only with part number specified.

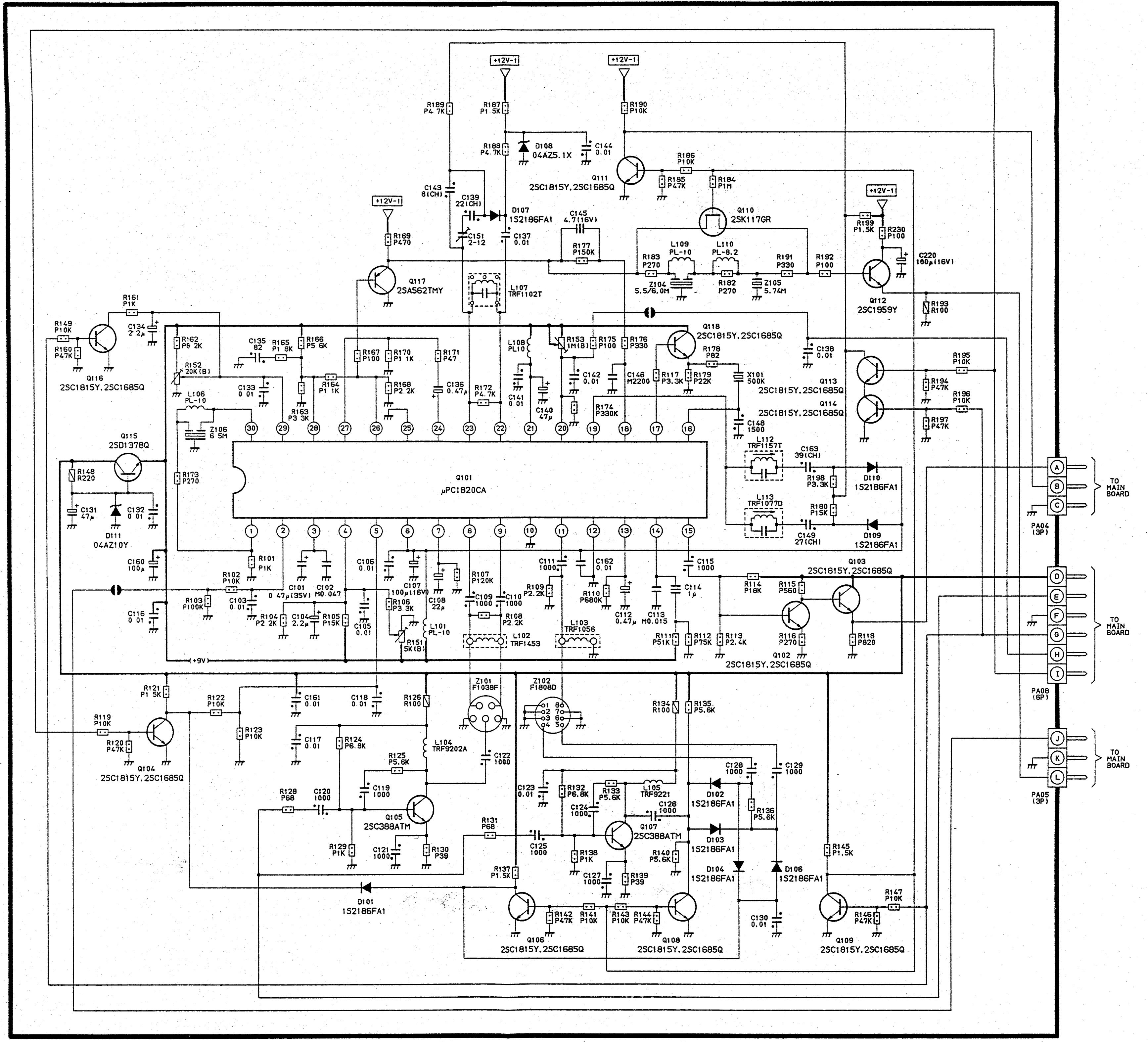
U904D R.G.B. BOARD PW9876-4



PP05A
#53
#54
#55
#56
#57
#58
TO PIP BOARD
+12V-2
PP06A (4P)
#24
#25
#23
#22
TO PIP BOARD
PH01A
#0
#9
#13
#12
#11
#10
YS
R
G
B
+12-2
P101 (W8P)
#40
#39
#37
#36
#41
#38
QH03
AN5862K
QH01
AN5862K
I
OUT
O
R G B
B G R
SW
CH08 1μ
CH09 1μ
CH21 1μ
RH25 P100
RH26 P100
RH27 P100
PH02
21Pin RGB
#4
#5
#6
#16
#7
#9
#8
#10
#11
L
M
DH23 1SS176FA
DH24 1SS176FA
DH25 1SS176FA
RH97 P6.8K
QH16 2SA1015Y,2SA564Q
QH04 2SC1815Y,2SC1685Q
RH19 P10K
RH23 P10K
CH07 10μ
RH96 P100
RH30 P4.7K
RH24 P2 2K
QH09 2SC1815Y,2SC1685Q
RH29 P3 3K
DH10 1SS176FA
QH11 2SC1815Y,2SC1685Q
RH32 P10K
RH31 P10K
PH05 (4P)
1J
1K
1L
1M
1Z
1I
1H
1G
1F
1E
1D
1C
E1 MAIN
PH04 (8P)
RH38 P2.7K
DH14 1SS176FA
RH16 P4.7K
QH10 2SC752G
RH90 P10K
CH23 82
DH15 1SS176FA
RH40 P2.7K
DH01 1SS176FA
DH02 1SS176FA
DH03 1SS176FA
RH01 P1.5K
RH06 P1.5K
RH03 P1.5K
CH01 1μ
CH02 1μ
CH03 1μ
CH22 1μ
RH76 P1K
RH77 P10K
RH78 P1K
RH04 P510
RH05 P620
RH02 P1.2K
RH81 P1K
DH29 1SS176FA
DH30 1SS176FA
QH06 2SC1815Y,2SC1685Q
RH80 P10K
RH34 P2.7K
RH79 P4.7K
QH14 2SC1815Y,2SC1685Q
RH75 P1K
RH74 P1K
RH92 P3.3K
DH32 1SS176FA
DH31 1SS176FA
RH91 P10K
RH18 P1K
DH08 1SS176FA
RH39 P2.7K
QH13 2SC752GTM-O
RH72 P10K
RH73 P10K
Q670 TA8710S
R678 R430
R679 P1M
C673 47μ
C674 0.01
C675 470
C676 470
Z673 500K
C677 68(CH)
R680 P22K
L671 TRF3073D
PG01
#70
#69
#68
#67
#66
#65
X
Z
Y
W
V
DA10 μPC574JC
+5V-1
CA13 2.2μ
CA14 0.01
RA60 P33K
RA55 P33K
DA11 1SS176FA
DA09 1SS176FA
RA56 P33K
RA57 P33K
CA15 M0.1
CA16 M0.1
CA17 M0.1
QA19 2SC1815Y,2SC1685Q
RA54 P22K
CA11 390
CA12 220
CA22 470μ(16V)
ICA30 LA7910
RA65 P10K
RA66 P10K
RA61 P3.9K
DA12 1SS176FA
QB04 2SC1815Y,2SC1685Q
DB40 1SS176FA
RB25 P10K
RB18 S5.6M
CB07 0.1
RB15 P15K
LA03 TLN3040D or TLN3040
RB19 S5.6M
RB17 P1K
Q671 2SC1815Y,2SC1685Q
R671 P56K
C670 47
C671 47
R670 P1K
L670 PL-12
R672 P56K
R673 P1K
R674 P1K
R675 P1K
R676 P1K
Z670 5.5M
Z671 6.0M
Z672 6.5M
C672 0 01
R677 P1.5K
Z674 6.0M
R681 P820
C678 0.01
R682 P2.2K
PA03 L13P(B/B)
PB01
PA02 (8P)
TO MAIN BOARD

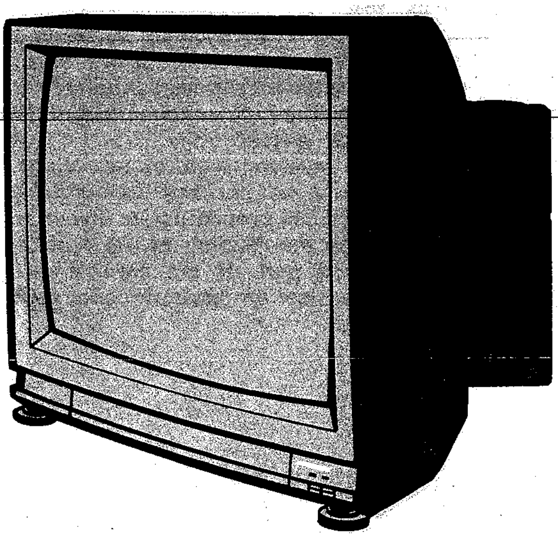

PH02
21PIn RGB
R
G
B
#16
#4
#5
#6
#7
#9
#8
#10
#11
L
M
PH05 (4P)
PH04 (8P)
E1 MAIN
PG01
#70
#69
#68
#67
#66
#65
X
Z
Y
W
V
C677 68(CH)
R680 P22K
C672 0.01
R677 P1.5K
R681 P820
C678 0.01
R682 P2.2K

U904E PIF BOARD PW9876-5


Q101 μPC1820CA
Q115 2SD1378Q
R148 R220
C131 47μ
D111 04AZ10Y
C132 0.01
C160 100μ
C116 0.01
+9V
Q116 2SC1815Y,2SC1685Q
R149 P10K
R160 P47K
R161 P1K
C134 2.2μ
R162 P8.2K
R152 20K(B)
L106 PL-10
Z106 6.5M
R173 P270
C133 0.01
C135 82
R165 P1.8K
R166 P5.6K
R163 P3.3K
R164 P1.1K
R167 P100
R170 P1.1K
R168 P2.2K
R171 P47
C136 0.47μ
R172 P4.7K
Q117 2SA562TMY
R169 P470
+12V-1
L107 TRF1102T
C151 2-12
C143 8(CH)
C139 22(CH)
D107 1S2186FA1
C137 0.01
R189 P4.7K
R187 P1.5K
R188 P4.7K
D108 04AZ5.1X
C144 0.01
R190 P10K
Q111 2SC1815Y,2SC1685Q
R186 P10K
R185 P47K
R184 P1M
Q110 2SK117GR
C145 4.7(16V)
R177 P150K
R183 P270
L109 PL-10
L110 PL-8.2
Z104 5.5/6.0M
R182 P270
Z105 5.74M
R191 P330
R192 P100
R199 P1.5K
R230 P100
C220 100μ(16V)
Q112 2SC1959Y
R193 R100
L108 PL10
C141 0.01
C140 47μ
R153 1M(B)
R175 P100
R176 P330
C142 0.01
C146 M2200
R174 P330K
Q118 2SC1815Y,2SC1685Q
R117 P3.3K
R178 P82
R179 P22K
X101 500K
C138 0.01
C148 1500
Q113 2SC1815Y,2SC1685Q
Q114 2SC1815Y,2SC1685Q
R195 P10K
R194 P47K
R196 P10K
R197 P47K
L112 TRF1157T
L113 TRF1077D
C163 39(CH)
C149 27(CH)
R198 P3.3K
R180 P15K
D110 1S2186FA1
D109 1S2186FA1
R101 P1K
R102 P10K
R103 P100K
C103 0.01
C101 0.47μ(35V)
C102 M0.047
R104 P2.2K
C104 2.2μ
R105 P15K
C106 0.01
C105 0.01
R106 P3.3K
C107 100μ(16V)
C108 22μ
R151 5K(B)
L101 PL-10
R107 P120K
C109 1000
C110 1000
R108 P2.2K
L102 TRF1453
C111 1000
C162 0.01
R109 P2.2K
R110 P680K
L103 TRF1056
C112 0.47μ
C113 M0.015
C114 1μ
C115 1000
R111 P51K
R112 P75K
R113 P2.4K
R114 P18K
R115 P560
R116 P270
R118 P820
Q102 2SC1815Y,2SC1685Q
Q103 2SC1815Y,2SC1685Q
R121 P1.5K
R119 P10K
R120 P47K
Q104 2SC1815Y,2SC1685Q
R122 P10K
R123 P10K
C161 0.01
C118 0.01
C117 0.01
R124 P6.8K
R126 R100
L104 TRF9202A
R125 P5.6K
C119 1000
C122 1000
Z101 F1038F
Z102 F1808D
R128 P68
C120 1000
Q105 2SC388ATM
R129 P1K
C121 1000
R130 P39
D101 1S2186FA1
R131 P68
C125 1000
R137 P1.5K
Q106 2SC1815Y,2SC1685Q
R142 P47K
R141 P10K
C123 0.01
R132 P6.8K
R133 P5.6K
L105 TRF9221
C124 1000
C126 1000
Q107 2SC388ATM
R138 P1K
C127 1000
R139 P39
R140 P5.6K
R143 P10K
R144 P47K
Q108 2SC1815Y,2SC1685Q
R134 R100
R135 P5.6K
C128 1000
C129 1000
D102 1S2186FA1
D103 1S2186FA1
R136 P5.6K
D104 1S2186FA1
D106 1S2186FA1
C130 0.01
R145 P1.5K
Q109 2SC1815Y,2SC1685Q
R147 P10K
R146 P47K
PA04 (3P)
PA08 (6P)
PA05 (3P)
TO MAIN BOARD
TO MAIN BOARD
TO MAIN BOARD
A
B
C
D
E
F
G
H
I
J
K
L

SERVICE DATA
FILE NO. 050-206
9-SYSTEM

TOSHIBA
COLOUR TELEVISION
309P8F



SPECIFICATIONS

Power Input Rating:	110 watts (nominal), AC175 ~ 270 volts, 50Hz	
Aerial Input Impedance:	75 ohm unbalanced type VHF and UHF	
Receiving Channels:	**PAL B/G, SECAM B/G system**	
	VHF channels	channels 2 to 12
	UHF channels	channels 21 to 69
	PAL D/K, SECAM D/K, K1 system	
	VHF channels	channels 1 to 12
	UHF channels	channels 21 to 69
	PAL I system	
	UHF channels	channels 21 to 69
	SECAM L system	
	VHF channels	channels A, B, C, C1, 1 to 6
	UHF channels	channels 21 to 69
	CATV BAND	
	PAL B/G, SECAM B/G	cannels S3 to S20
	NTSC-M	cannels B to Q (70 to 86)
Intermediate Frequences:	Picture I-F carrier frequency	32.7 MHz, 37.4 MHz Sub 38.9 MHz
	Sound I-F carrier frequency	39.2/31.9 MHz Sub 33.4 MHz 38.7/31.4 MHz Sub 32.9 MHz 38.7/30.9 MHz Sub 32.4 MHz
Picture Tube:	A70JYQ97X01 (70 cm measured on diagonal of viewable picture area), 110° Deflection	
Sound Output:	Main: 10.0 watts x 2, Surround: 5.0 watts x 2	
Speaker:	Main: 100 mm 2pcs, 20 mm 2pcs, Surround: 100 mm 2pcs	
Dimension:	Height	647 mm
	Width	700 mm (Without Speaker Box)
	Depth	520 mm
Weight:	50.1 kg	
Features:	Clearness tube, VIDEO and AUDIO input/output terminals, S-VIDEO input terminals Surround audio system, Off timer, Remote Control, PIP, Selectable Picture	

Specifications are subject to change without notice.

Printed in Japan Jul. 1989 (So) 5

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECUATION" , "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" DESCRIBED BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 30.4kV at zero beam current (minimum brightness) under 175 ~ 270V AC power source. The high voltage must not, under any circumstances, exceed 32kV.
   Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

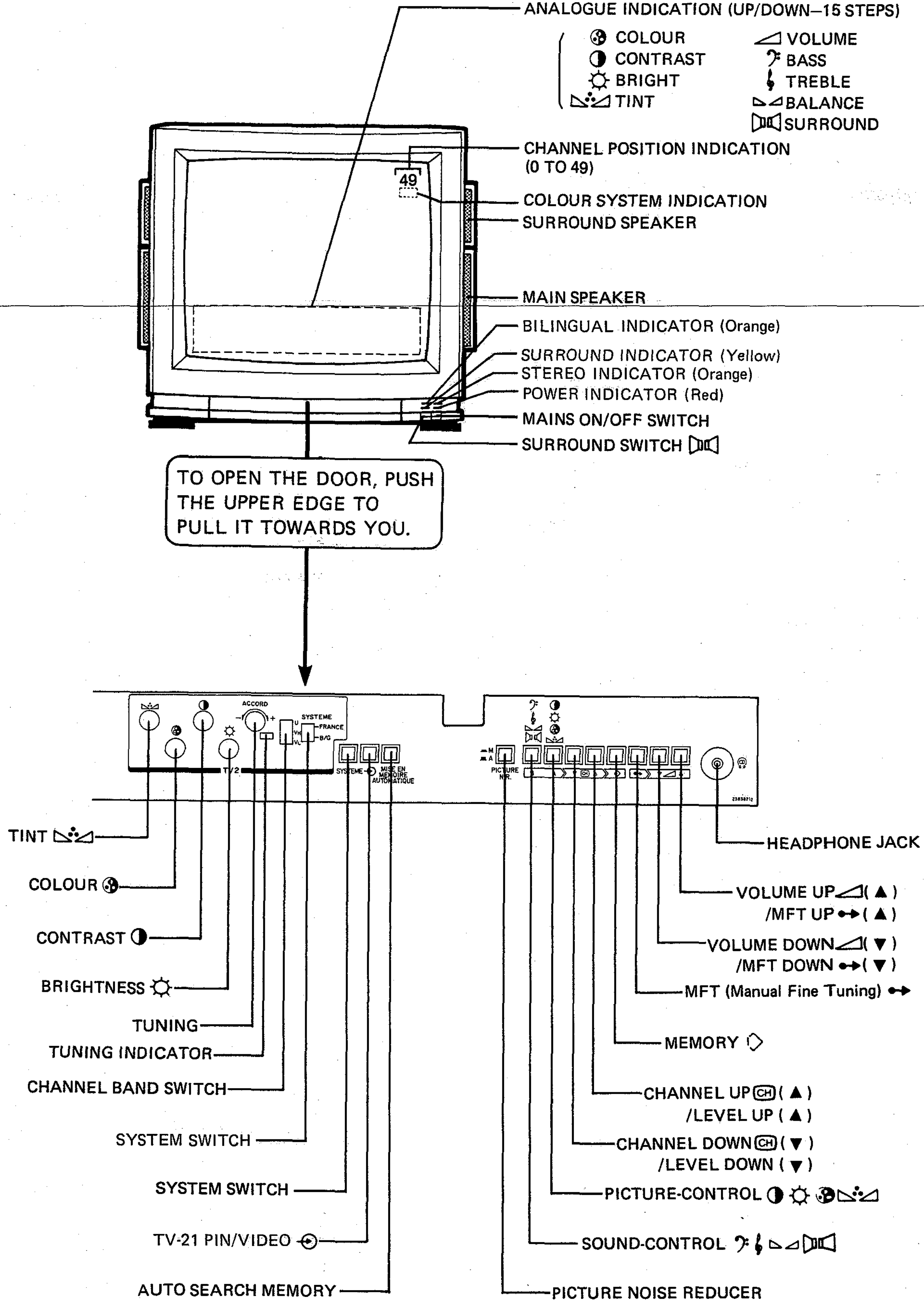
1. Potentials as high as 30.4kV are present when this receiver is operating. Operation of the receiver outside the cabinet or with back board removed involves a shock hazard from the receiver.
   1. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high-voltage equipment.
   2. Always discharge the picture tube anode to the receiver chassis to keep off the shock hazard before removing the anode cap.
   3. Perfectly discharge the high potential of the picture tube before handling the tube. The picture tube is highly evacuated and if broken, glass fragments will be violenty expelled.
2. If any Fuse in this TV receiver is blown, replace it with the FUSE specified in the specified in the chassis parts list.
3. When replacing parts or circuit boards, wind the lead wires around terminals before soldering.
4. When replacing a high wattage resistor (oxide metal film resistor) in circuit board, keep the resistor 10mm away from circuit board.
5. Keep wires away from high voltage or high temperature components.
6. This receiver can be operated under AC 175 ~ 270 volts, 50Hz. NEVER connect to DC supply or any other power.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-RAY RADIATION protection afforded by them cannot necessarily be obtained by using replacement conpoments rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements, electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may creat X-RAY RADIATION.

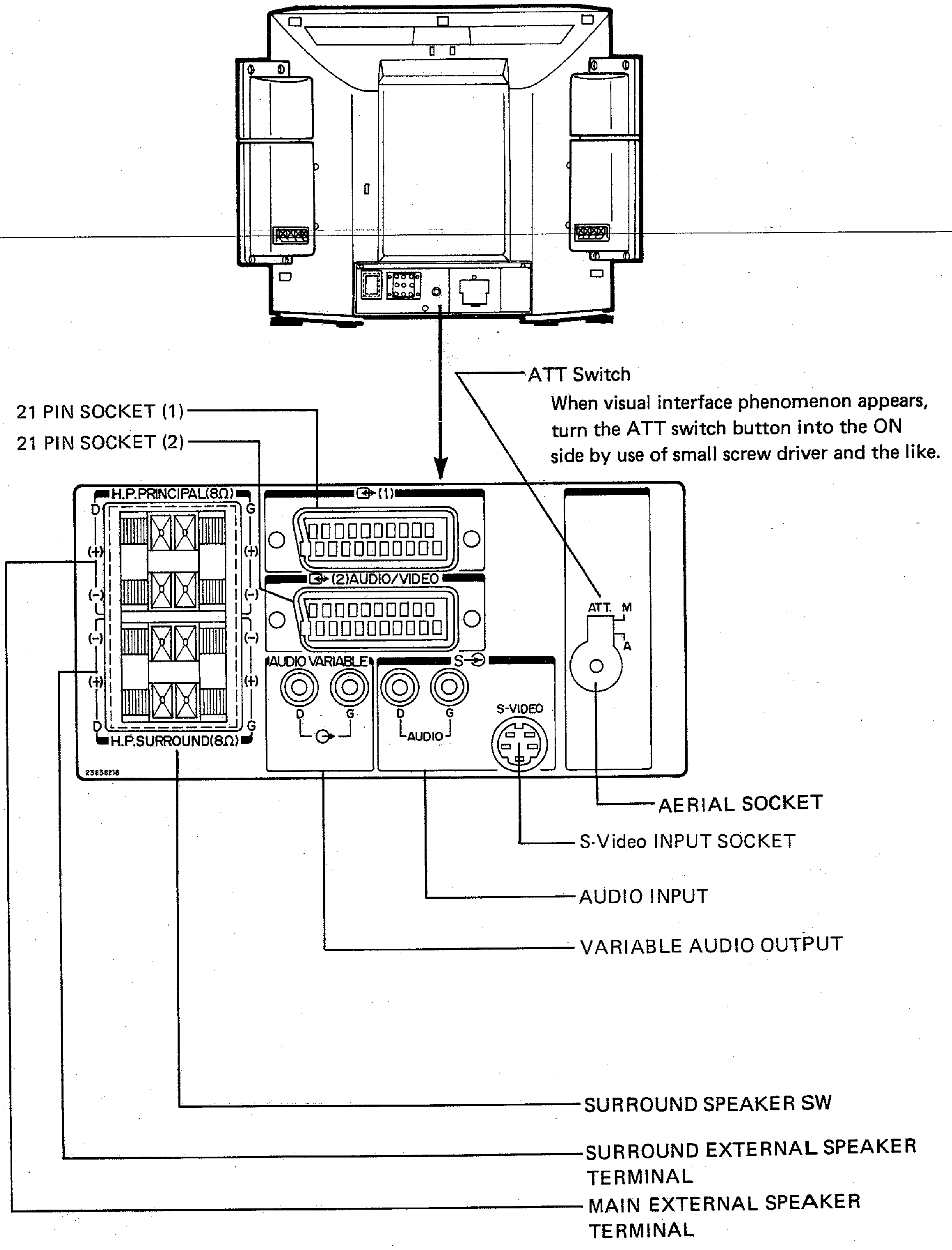
LOCATION OF CONTROLS

FRONT


ANALOGUE INDICATION (UP/DOWN–15 STEPS)
COLOUR
CONTRAST
BRIGHT
TINT
VOLUME
BASS
TREBLE
BALANCE
SURROUND
49
CHANNEL POSITION INDICATION (0 TO 49)
COLOUR SYSTEM INDICATION
SURROUND SPEAKER
MAIN SPEAKER
BILINGUAL INDICATOR (Orange)
SURROUND INDICATOR (Yellow)
STEREO INDICATOR (Orange)
POWER INDICATOR (Red)
MAINS ON/OFF SWITCH
SURROUND SWITCH
ACCORD
SYSTEME
U
VH
VL
FRANCE
B/G
TV/2
SYSTEME
MISE EN MEMOIRE AUTOMATIQUE
M
A
PICTURE NR.
TINT
COLOUR
CONTRAST
BRIGHTNESS
TUNING
TUNING INDICATOR
CHANNEL BAND SWITCH
SYSTEM SWITCH
SYSTEM SWITCH
TV-21 PIN/VIDEO
AUTO SEARCH MEMORY
HEADPHONE JACK
VOLUME UP (▲)
/MFT UP (▲)
VOLUME DOWN (▼)
/MFT DOWN (▼)
MFT (Manual Fine Tuning)
MEMORY
CHANNEL UP CH (▲)
/LEVEL UP (▲)
CHANNEL DOWN CH (▼)
/LEVEL DOWN (▼)
PICTURE-CONTROL
SOUND-CONTROL
PICTURE NOISE REDUCER

TO OPEN THE DOOR, PUSH THE UPPER EDGE TO PULL IT TOWARDS YOU.

BACK


H.P.PRINCIPAL(8Ω)
D
G
(+)
(−)
(−)
(+)
D
G
H.P.SURROUND(8Ω)
23838216
(1)
(2)AUDIO/VIDEO
AUDIO VARIABLE
D
G
S
D
G
AUDIO
S-VIDEO
ATT.
M
A

ATT Switch

When visual interface phenomenon appears, turn the ATT switch button into the ON side by use of small screw driver and the like.

21 PIN SOCKET (1)

21 PIN SOCKET (2)

AERIAL SOCKET

S-Video INPUT SOCKET

AUDIO INPUT

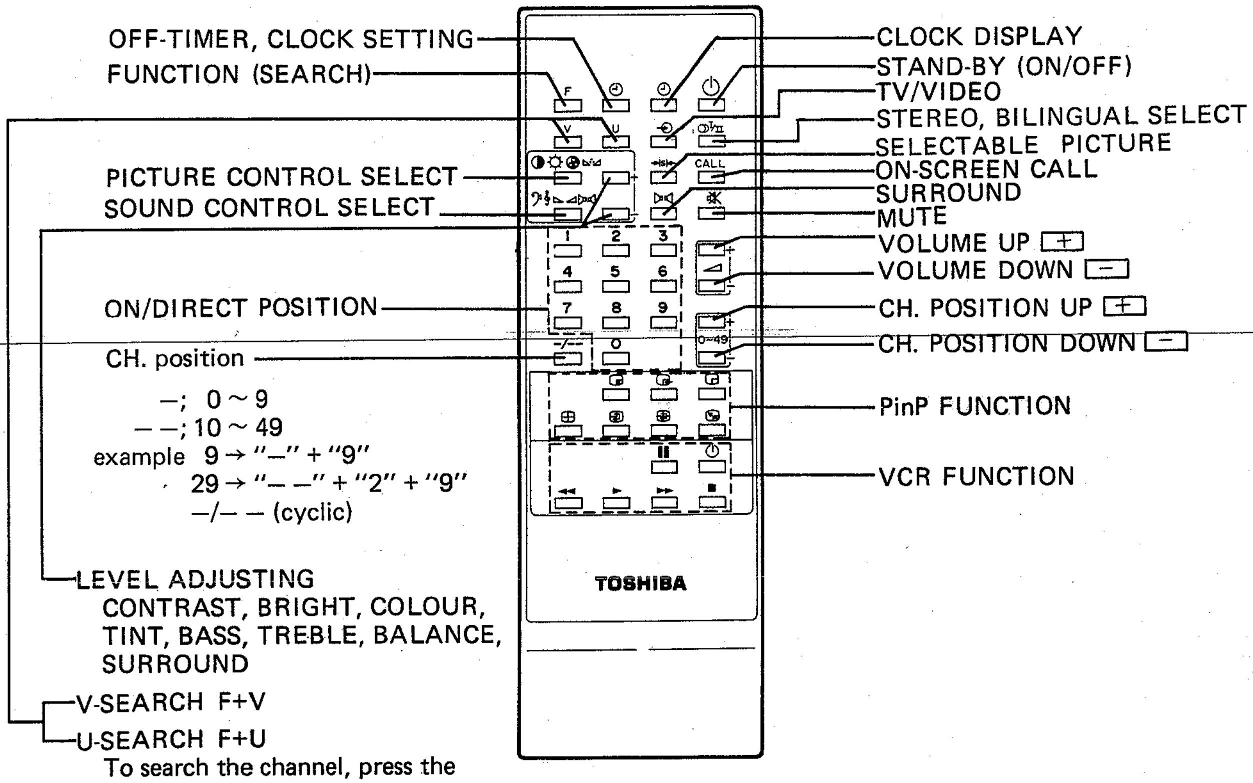
VARIABLE AUDIO OUTPUT

SURROUND SPEAKER SW

SURROUND EXTERNAL SPEAKER TERMINAL

MAIN EXTERNAL SPEAKER TERMINAL

■ REMOTE CONTROL HAND UNIT

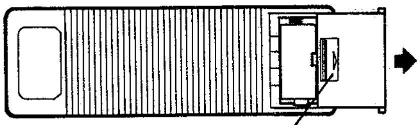

OFF-TIMER, CLOCK SETTING
FUNCTION (SEARCH)
PICTURE CONTROL SELECT
SOUND CONTROL SELECT
ON/DIRECT POSITION
CH. position
–; 0 ~ 9
– –; 10 ~ 49
example 9 → "–" + "9"
29 → "– –" + "2" + "9"
–/– – (cyclic)
LEVEL ADJUSTING
CONTRAST, BRIGHT, COLOUR, TINT, BASS, TREBLE, BALANCE, SURROUND
V-SEARCH F+V
U-SEARCH F+U
CLOCK DISPLAY
STAND-BY (ON/OFF)
TV/VIDEO
STEREO, BILINGUAL SELECT
SELECTABLE PICTURE
ON-SCREEN CALL
SURROUND
MUTE
VOLUME UP ⊞
VOLUME DOWN ⊟
CH. POSITION UP ⊞
CH. POSITION DOWN ⊟
PinP FUNCTION
VCR FUNCTION
F
V
U
CALL
1
2
3
4
5
6
7
8
9
0
-/--
0~49
TOSHIBA

To search the channel, press the F button together. F+V/F+U

Before operating

INSTALLING THE BATTERIES

1. Remove the battery cover.
2. Insert the two "AA" (pencil size) 1.5V batteries making sure the polarity (+ or –) of the batteries matches the polarity marks inside the unit.
3. Close the battery cover.

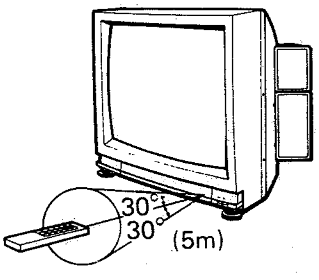


Press and slide to open.

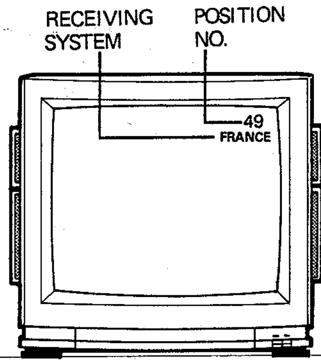
TIPS FOR REMOTE OPERATION

- If intermittent remote control operation occurs, replace the batteries according to "INSTALLING THE BATTERIES."
- The battery life should be about a year under normal use.
- When the Remote Control Hand Unit is not used for a long period of time or when the batteries are worn out, take out the batteries to prevent liquid leak.
- Do not throw the batteries into a fire. Dispose of used batteries in the specified places.
- Take care not to drop, dampen, disassemble the Remote Control Hand Unit.

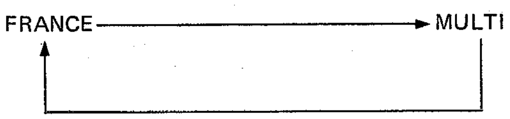
Effective Range



COLOUR SYSTEM SELECTION



SYSTEM SWITCH OPERATION



RECEIVING SYSTEM

- **FRANCE** SECAM – L
- **MULTI** PAL, SECAM, 4.43NTSC can be received.

Note:
Colour system indication is displayed in green when the TV is switched on automatic mode and in cyan when switched on manual mode.

Receiving Systems				Function
System	Main Tuner	Sub Tuner	Video IN	
1. PAL B/G	○	○	○	Reception of broadcast and playback for video cassette recorder
2. PAL I	○	X	○	
3. PAL D/K	○	X	○	
4. SECAM B/G	○	○	○	
5. SECAM D/K, K1	○	X	○	
6. NTSC M	X	X	X	
7. NTSC 4.43/5.5MHz	○	○	○	Playback for special video cassette recorder
8. NTSC 4.43/6.0MHz	○	X	○	
9. NTSC 4.43/6.5MHz	○	X	○	
10. NTSC 3.58/5.5MHz	X	X	X	
11. NTSC 3.58/6.0MHz	X	X	X	
12. NTSC 3.58/6.5MHz	X	X	X	
13. SECAM I (6.0MHz)	○	X	○	
14. SECAM L	○	○	○	
15. NTSC 3.58/4.5MHz/50Hz	X	X	X	Playback for special video disk, CDV player
16. PAL 5.5MHz/60Hz	○	○	○	
17. PAL 6.0MHz/60Hz	○	X	○	
18. PAL 6.5MHz/60Hz	○	X	○	
19. SECAM 5.5MHz/60Hz	○	○	○	
20. SECAM 6.0MHz/60Hz	○	X	○	
21. SECAM 6.5MHz/60Hz	○	X	○	

Main tuner

Receiving channels

- Regular TV VHF BAND
  2 – 12 (PAL/SECAM – B)
  1 – 12 (PAL/SECAM – D)
  2 – 9 (SECAM – K1)
  B – C, 1 – 6 (SECAM – L)
- Regular TV UHF BAND
  21 – 69 (PAL/SECAM – G, SECAM – L)
  21 – 69 (SECAM – K)
  13 – 56 (PAL – K)
  21 – 68 (PAL – I)
- CATV BAND
  B ~ Q (70 ~ 86) (SECAM – L)
  S3 ~ S20 (PAL/SECAM – B, G)

Sub tuner

Receiving channels

- Regular TV VHF BAND
  2 – 12 (PAL/SECAM – B)
  1 – 6 (SECAM – L)
- Regular TV UHF BAND
  21 – 69 (PAL/SECAM – G, SECAM – L)

■ COUNTERMEASURES AGAINST MALFUNCTION IN FRINGE AREA

1. In Case Abnormal Signals Were Memoried by Auto Search

If you mind this, reset the memory by MFT (Manual Fine Tuning) from the position after the one where the abnormal signals were memorized.

Example:

(1) In the case of receiving successive channels.
(2) In using video tape reproduced repeatedly.
(3) When receiving different systems in the vicinity of border where receiving conditions are bad.
(4) In the area where strong and week electric fields are mixed in the channels.

TV PROGRAM RECEPTION

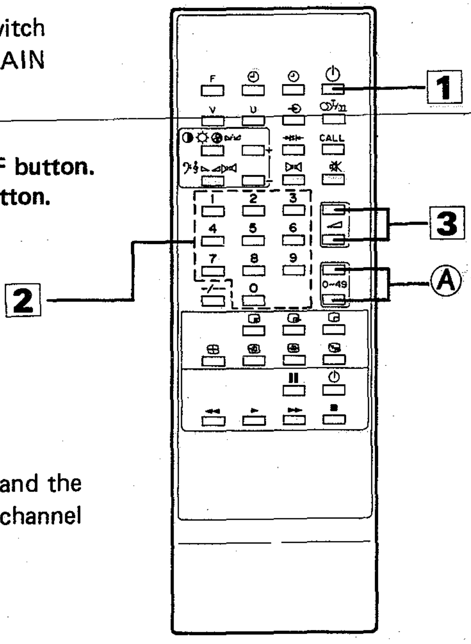
■ WHEN USING REMOTE CONTROL HAND UNIT

SET UP

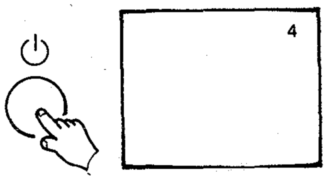
Press the switch: Indicator lamp will be lit and the TV set is ready for viewing.

To turn off the TV: Press the button again.

- Once the MAIN ON/OFF switch is turned on, you can remote-control the TV set.
- If the TV turned off by pressing the MAIN ON/OFF switch on the TV set, it will be turned "on" by pressing the MAIN ON/OFF switch only.



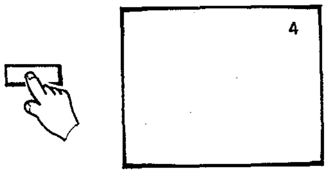
1 The TV set is turned on and off by pressing the ON/OFF button. Also it is turned "on" directly by pressing a POSITION button.



Press the button: The TV set will be turned "on" and the picture of previously viewed the channel is seen.

To turn off the TV: Press the button again.

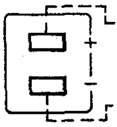
2 Channel is tuned by pressing the CHANNEL button.



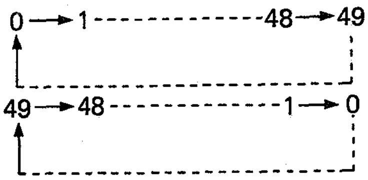
The picture will be changed over, and you will have the position No. displayed on the screen for a few seconds.

- When position No. is in 2 digits (10 to 49), press –/– – button (Remote Control Hand Unit). When – – is displayed on the screen, press a number of the tens digit, and then a number of the units digit.

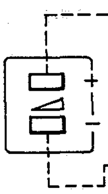
- Channel change can be performed by CHANNEL buttons Ⓐ as well.



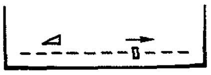
- Change will take place in the direction from 0 to 49
- Change will take place in the direction from 49 to 0.



3 Sound volume is adjusted by VOLUME buttons

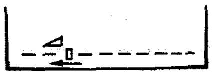


Sound becomes larger



Red square shifts rightwards, and the sound becomes larger.

Sound becomes smaller



Red square shifts leftwards, and the sound becomes smaller.

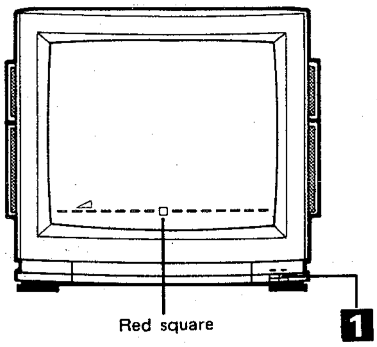
CONTROLLING THE TV SET PROPER

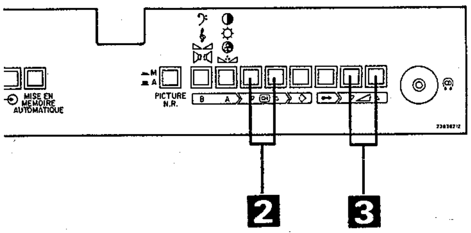
- In case the Remote Control Hand Unit is not near at hand, or batteries have been used up, you can control the TV on the receiver proper.

1 **The TV set is turned on and off by operating the MAIN ON/OFF switch.**

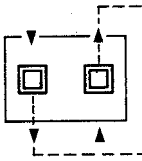
Press it: The TV set is turned on.
To turn off: Press the switch again.

Note: When the TV set is not turned on with the MAIN ON/OFF switch pressed, press the VOLUME buttons **3** or the CHANNEL buttons **2**.





2 **Channel is tuned by the CHANNEL buttons (behind the door)**



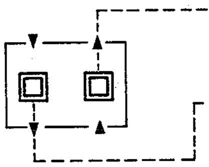
Change will take place in the direction from 0 to 49.

0 → 1 ------------ 48 → 49

Change will take place in the direction from 49 to 0.

49 → 48 ------------ 1 → 0

3 **Sound volume is adjusted by VOLUME buttons (behind the door)**



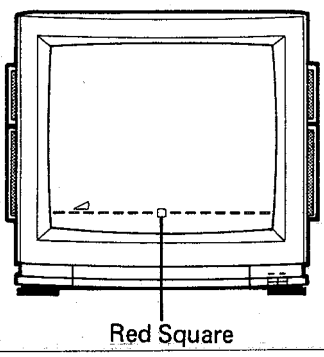
Sound becomes larger
The sound becomes larger, with the red square on the screen shifting rightwards.

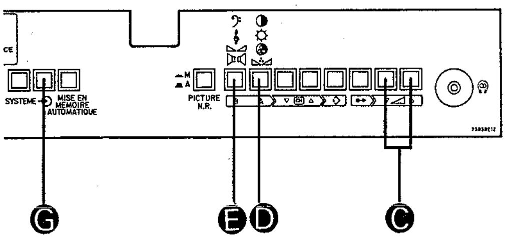
Sound becomes smaller
The sound becomes smaller, with the red square on the screen shifting leftwards.

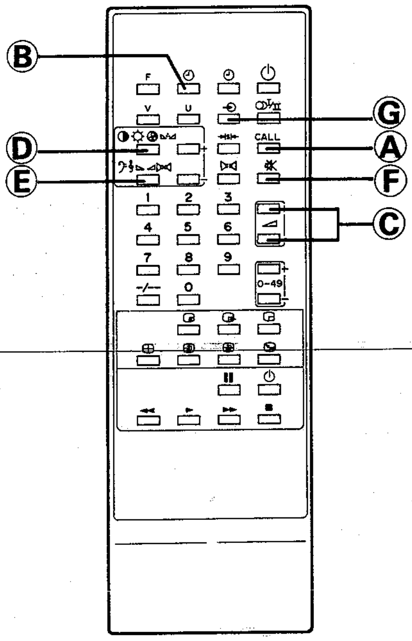
Notes:
- In operating the Remote Control Hand Unit, direct it toward the receiving section of the receiver.
- Even if power is turned off by pressing the POWER button on the Remote Control Hand Unit, a trace of electric current stays flowing in the TV set. If television is not viewed for a long time, turn off the MAIN ON/OFF switch. When going out, take out the power plug from the wall outlet.

AUXILIARY FUNCTIONS

■ YOU MAY HAVE OPERATING CONDITIONS DISPLAYED ON THE SCREEN

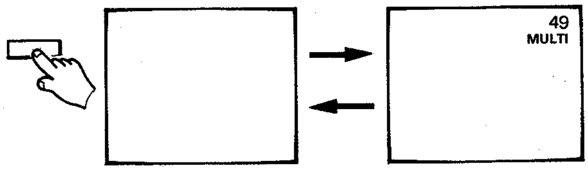



SYSTEME
MISE EN MEMOIRE AUTOMATIQUE
PICTURE N.R.
G
E
D
C


B
D
E
G
A
F
C
CALL
1
2
3
4
5
6
7
8
9
0
0-49

Ⓐ Press the CALL button

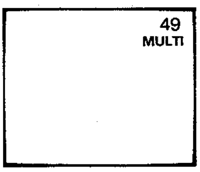
- The display and erasure will alternate each time the pushbutton is pressed.



■ Displays on the screen:

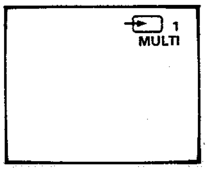
Channel number

- Is displayed in position Nos. from 0 to 49.
  The receiving system at the time is also displayed.



Video

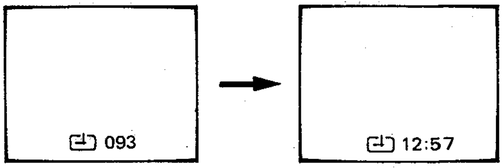
- In video mode, display is made either by ⇥ 1 or ⇥ 2.
  The receiving system at the time is also displayed.



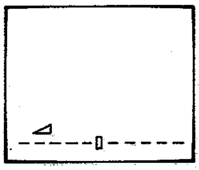
Ⓑ Press OFF TIMER, CLOCK SETTING button

- The display and erasure will alternate each time the pushbutton is pressed.

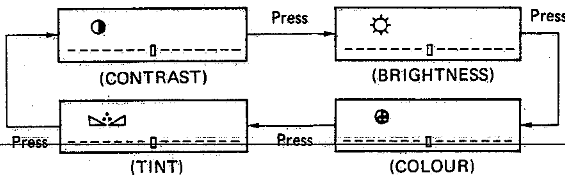
- The remaining time of the OFF TIMER will be displayed when the timer is reserved. If pressed once more, time is indicated. And the display will disappear if you press the button again.



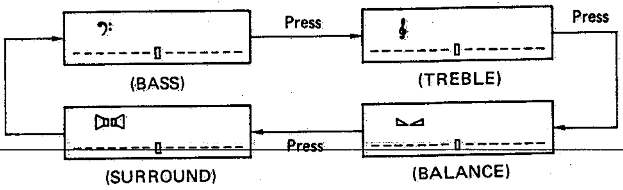
🅒 Ⓒ Sound Volume buttons



🅓 Ⓓ Press the PICTURE CONTROL button



🅔 Ⓔ Press the SOUND CONTROL button

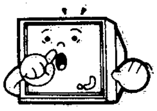


■ THE SOUND CAN BE MUTED TEMPORARILY

- **This feature is useful:**

During phone call.

Be silent!



When receiving a visitor.

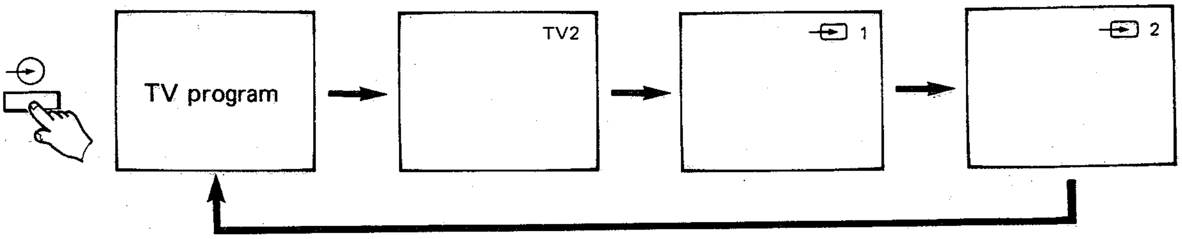
Ⓕ Press MUTE button

- The sound mute and restoration will alternate each time the button is pressed.
- The muting will be cancelled by pressing either POWER, CHANNEL, VOLUME, VIDEO, BASS, TREBLE, BALANCE, SURROUND LEVEL, SEARCH, ASM, or SYSTEM button.

■ IF YOU WANT TO ENJOY VIDEO APPLIANCES

🅖 Ⓖ Press VIDEO button

- Each time the video button is pressed, selection will be changed over in sequence.
- The VIDEO button on the TV set operates in the same way.



- If you press the CHANNEL button (0 to 49), the channel is changed over to the selected one.

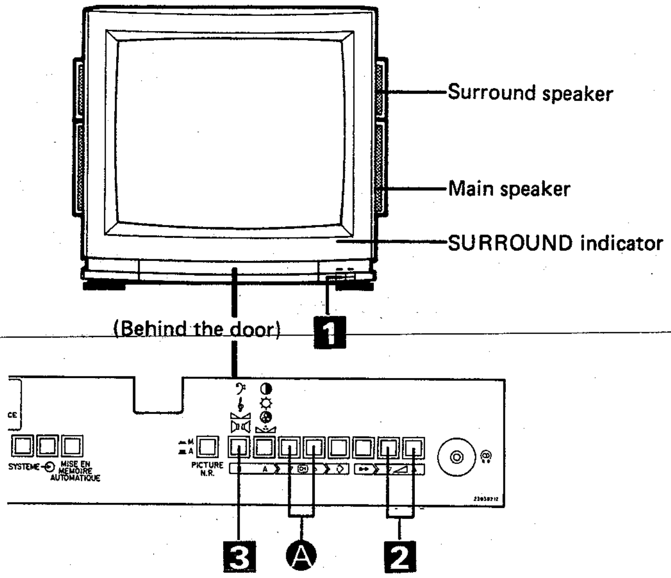
TV-21 PIN Mode: Even if in normal TV reception, the receiver will automatically switch to accessory when an appliance is connected to the 21-pin Peri socket and switched on. In case both 21-pin (1) and 21-pin (2) have input, 21-pin (1) will be given priority.

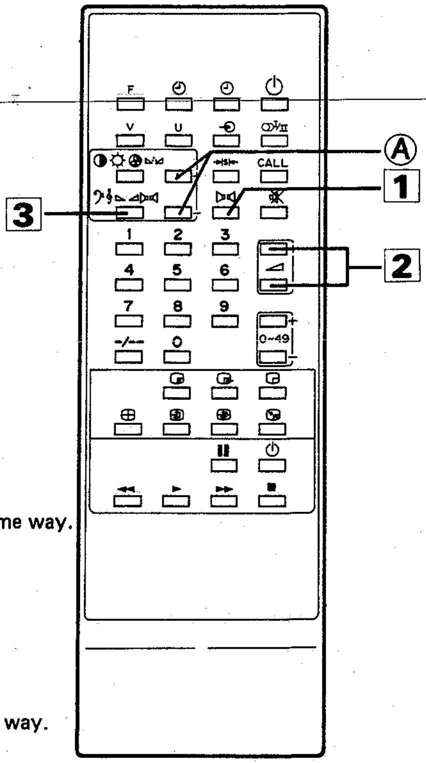
VIDEO Mode: If both 21-pin (2) and S-INPUT have input in VIDEO (⇥ 2), S-INPUT will be given priority.
21 pin (2) is for AUDIO VIDEO only.

Note: The source returns to the "TV-21 PIN" mode by pressing the power button or the channel button, when video mode is selected.

SURROUND AUDIO SYSTEM

■ WHEN ENJOYING REALISM OF SPREADING SOUND (SURROUNDING EFFECT)


Surround speaker
Main speaker
SURROUND indicator
(Behind the door)
1
SYSTEME
MISE EN MEMOIRE AUTOMATIQUE
PICTURE N.R.
3
A
2

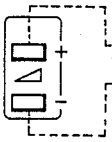

F
V
U
CALL
1
2
3
4
5
6
7
8
9
-/--
0
0~49
Ⓐ
1
2
3

1 1 Press the SURROUND button

Press the button: The effect is turned on.
The indicator lamp comes on.
To turn off: Press the button again.

- The SURROUND button on the TV set operates in the same way.

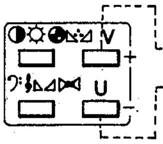
2 2 Adjust sound volume by the VOLUME buttons.



+ ---- Sound becomes larger.
– ---- Sound becomes smaller.

- The VOLUME button on the TV set operates in the same way.

3 3 Press the SOUND CONTROL buttons to select the surround mode, and then press Ⓐ Ⓐ LEVEL +/– button to adjust the surrounding effect.

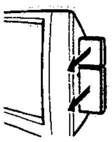


+ ---- Spread of sound is emphasized.
– ---- Spread of sound is reduced.

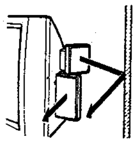
- The SOUND CONTROL button and LEVEL +/– button on the TV set operate in the same way.

SURROUND SPEAKER

- This TV set is equipped with a built-in surround speaker which gives you the feeling of presence on the scene, the feature only this TV set can provides.
- Adjusting angle of the surround speaker
  The surround speaker can be adjusted to an effective and optimum angle to match your room.



(Basic position)

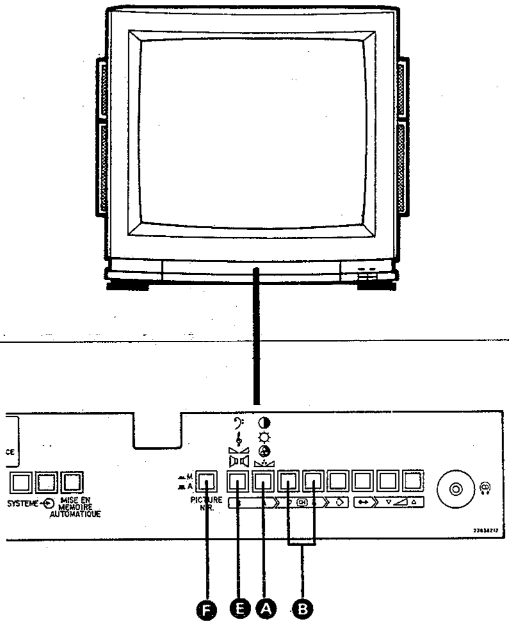


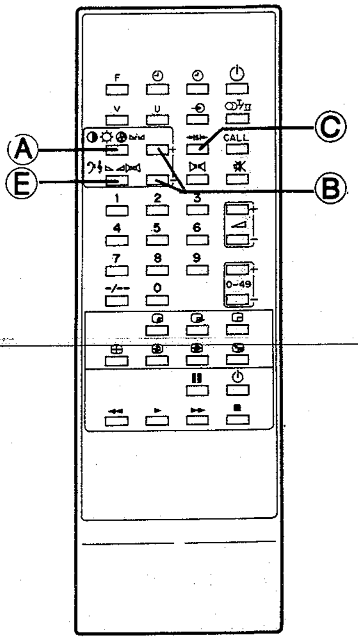
(Position utilizing reverberation)

- You can enjoy still larger surround effect by connecting optional surround speaker.

PICTURE AND SOUND CONTROLS

PICTURE CONTROL





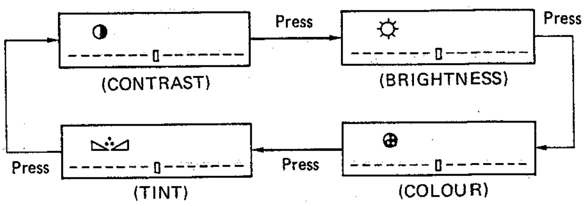
(CONTRAST, BRIGHTNESS, COLOUR, TINT)

To adjust picture for your preference, first select a function by the PICTURE Button 🅐Ⓐ,then adjust the level by the LEVEL Buttons 🅑Ⓑ.

- **FUNCTION SELECT**

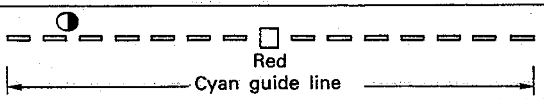
  Press the PICTURE Button 🅐Ⓐ to select a function to be adjusted among CONTRAST, BRIGHTNESS, COLOUR, TINT. One pressing shifts the function to the next one as shown right.

PICTURE CONTROL INDICATION

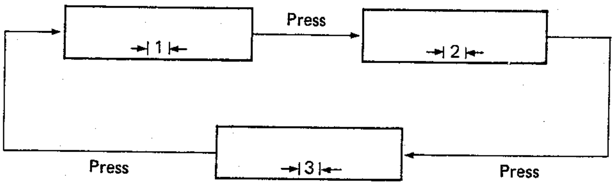


- **LEVEL ADJUSTMENT**

1. After the function selection above, immediately (within 4 seconds) press the ▲ (+) ▼ (−) Button of LEVEL Buttons 🅑Ⓑ
   Press continuously to shift the level to the next step, and release the button at your preferred picture.
   The LEVEL Buttons are effective only during the selected function is displayed.
2. Above display will disappear if no additional pressing of CONTROL or LEVEL (▲ / ▼) Button is done within 4 seconds.
3. The last adjusted value will be stored into memory when LEVEL (▲ or ▼) Button is released.
4. Adjustment steps and indication:
   Each function can be adjusted with 64 steps and it's approx. adjusted value is displayed with 15 steps.

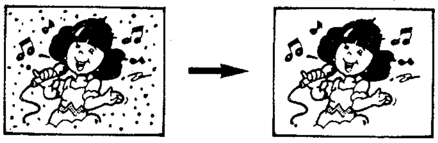
	FUNCTION	ON-SCREEN ADJUSTMENT DISPLAY	
		 Red Cyan guide line	
		CONTROL DOWN ▼ Button (The Red square moves left)	CONTROL UP ▲ Button (The Red square moves right)
PICTURE CONTROL Button	CONTRAST ◑	Weak	Strong
	BRIGHTNESS ☼	Dark	Light
	COLOUR ⊕	Pale	Deep
	TINT	Purplish	Greenish

5. The SELECTABLE PICTURE (→|S|←) Button Ⓒ changes the level corresponding to picture control function (CONTRAST, BRIGHTNESS, COLOUR and TINT) to three kinds of fixed values. You may select desired patterns of picture.



PICTURE NOISE REDUCER

Pressing the PICTURE N.R. button 🅕 reduces noise in picture to provide a clear image.


N.R. Switch: OFF N.R. Switch: ON
(Under normal signal strength)

SOUND CONTROL

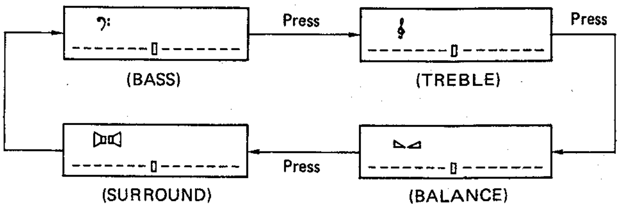
(BASS, TREBLE, BALANCE, SURROUND)

To adjust sound for your preference, first select a function by the SOUND Button 🅔Ⓔ, then adjust the level by the LEVEL Buttons🅑Ⓑ.

- **FUNCTION SELECT**

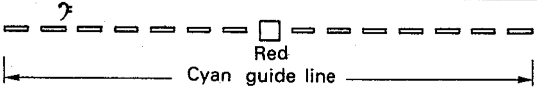
  Press the SOUND Button 🅔Ⓔ to select a function to be adjusted among BASS, TREBLE, BALANCE and SURROUND. One pressing shifts the function to the next one as shown below.

SOUND CONTROL INDICATION



- **LEVEL ADJUSTMENT**

1. After the function selection above, immediately (within 4 seconds) press the ▲ (+) or ▼ (−) Button of LEVEL Buttons🅑Ⓑ.
   Press continuously to shift the level to the next step, and release the button at your preferred sound.
   The LEVEL Buttons are effective only during the selected function is displayed.
2. Above display will disappear if no additional pressing of CONTROL or LEVEL (▲/▼) Button is done within 4 seconds.
3. The last adjusted value will be stored into memory when LEVEL (▲/▼) Button is released.
4. Adjustment steps and indication:
   Each function can be adjusted with 64 steps and it's adjusted approx. value is displayed with 15 steps.

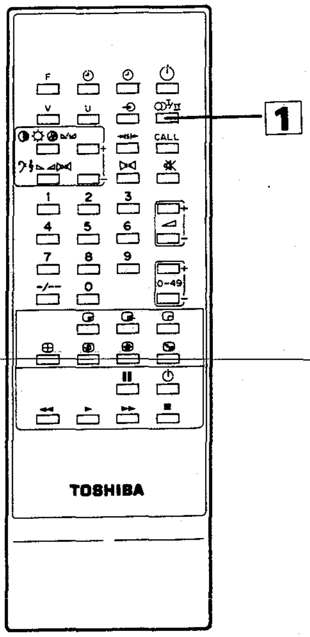
	FUNCTION	ON-SCREEN ADJUSTMENT DISPLAY	
		 Red Cyan guide line	
		CONTROL DOWN ▼ Button (The red square moves left)	CONTROL ▲ UP Button (The red square moves right)
SOUND CONTROL Button	BASS 𝄢	Low tones are weakened	Low tones are enhanced
	TREBLE 𝄞	High tones are weakened	High tones are enhanced
	BALANCE	Lowers sound from the right speaker	Lowers sound from the left speaker
	SURROUND	Surround effect is weakened	Surround effect is enhanced

■STEREO BILINGUAL SELECTION

Stereo and Bilingual facilities may be selected by use of the button marked ꝏ I/II [1] as follows:

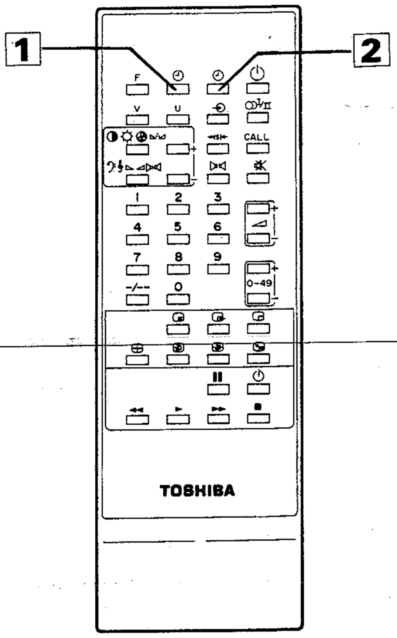
TRANSMISSION	INDICATION	SELECTED FACILITIES		
		ꝏ/I	ꝏ/II	▽
Stereo	Orange Light	Stereo	Stereo	Mono
Mono	No Light	Mono	Mono	Mono
Bilingual	Orange Light	Channel I	Channel II	Mono

Stereo and Bilingual facilities available subject to transmitted signals and may be selected when indicated by the lights on the right hand side of the set.



CLOCK OPERATION

With this feature, you can see the present time displayed on screen by pressing a button. Clock display is on 24 hr. basis from 0:00 to 23:59.



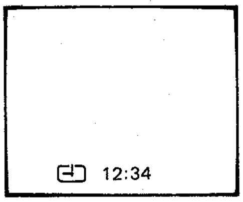
How to set the present time, and start the CLOCK

1. Depress the TIMER/CLOCK Button [1] two times to enter CLOCK mode, and set the present time by using 10 keys.
   When the CLOCK mode is entered, the time at that point is displayed, and the place of tens for hour blinks. Setting a numeral there causes the place of units for hour to blink for figure entry, and the numerals other than that of the tens digit will go to 0.
   Similarly, you can set the numerals for places of tens and of units for minutes, and upon their completion, blinking goes back to the tens digit for hours.
2. After the present time has been set, depress the TIMER/CLOCK Button [1] to start the CLOCK. Concurrently, the set time will be displayed in green colour for about one sec. With this operation of depressing the button, the CLOCK mode is released.

NOTE:

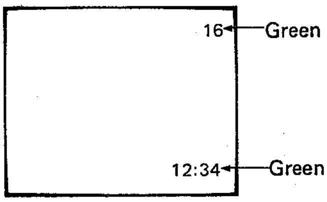
- If power plug is unpluged and the MAIN ON/OFF switch is turned off, the set time will turn into 00:00.
  The same is true for electric failure, in which case the time may please be set again.

Time display during the setting



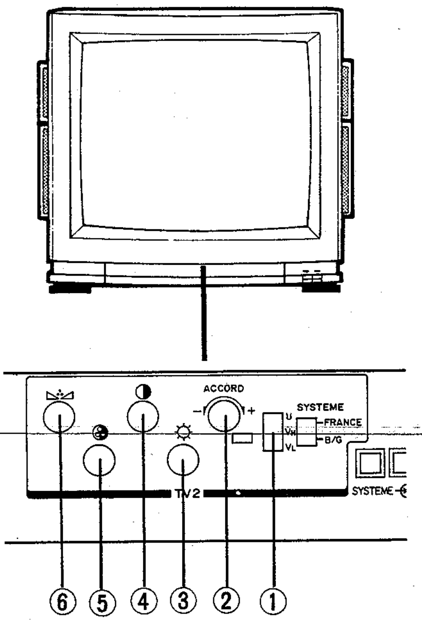
During the setting of the present time, the display will remain the same, even if the time is elapsed meanwhile.

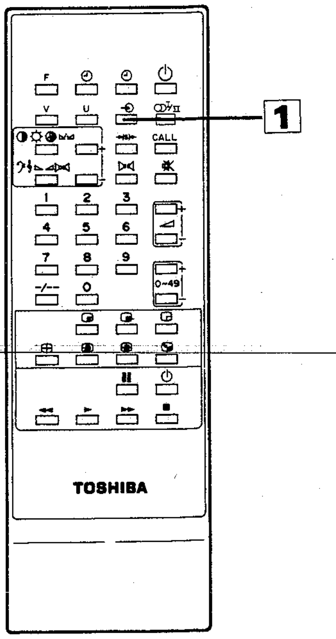
Time display during the setting



The present time is displayed in the lower righthand corner on the screen by depressing the CLOCK Button [2].
If the CLOCK is not set, the display will be 00:00.

SUB TUNER CHANNEL SETTING AND CONTROL ADJUSTMENTS





1 SUB TUNER CHANNEL SETTING

1. Press TV/VIDEO button 1 to have TV2 indicated on the screen.

2. Make sure the channel range with the figure, and select Band switch ① .

   PAL B/G, SECAM B/G
   channel range 1 – 4; Band VHF Low
   channel range 5 – 12; Band VHF High
   channel range 21 – 69; Band UHF

   SECAM L
   channel range 1 – 6; Band VHF High
   channel range 21 – 69; Band UHF
   * VHF Low channel cannot be received.

3. Rotate TUNING ② to select the picture.

   Sub timer provides channel tunning for one single station only.
   If change-over is desired, repeat the steps from 1 to 3.

2 CONTROL ADJUSTMENTS

TO ADJUST BRIGHTNESS

Adjust picture for natural brightness when black and white picture appears too dark or too light. For best results, operate the BRIGHTNESS and CONTRAST Controls together, until picture is clear and sharp.

TO ADJUST CONTRAST

If black and white picture does not show desired contrast between light and dark shades, adjust the CONTRAST Control for desired picture quality. A slight readjustment of the BRIGHTNESS Control may also be necessary.

TO ADJUST COLOUR

After obtaining best black & white picture, carefully turn the COLOUR Control slowly clockwise.

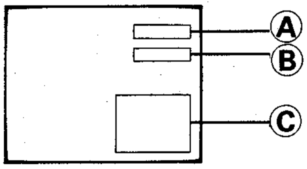
TO ADJUST TINT (for NTSC 4.43 systems)

Adjust the TINT Control to obtain natural facial tones.
When facial tones are natural, all other colours in your picture will be seen in true to life brilliance.

SPECIAL FUNCTION AND FEATURES

PinP (Picture in Picture) FUNCTION

DISPLAY



NOTE:

- If there are no signals from main and sub pictures or if there exists week electric field, the PinP may not work correctly.
- The frame of sub pictures may tremble finely.

Ⓐ **Indicates the position of the main picture as well as the external input mode (green)**

Pos. No.	Program No. of the 1st tuner
TV 2	The 2nd tuner
-⊙ 1	21 PIN (1)
-⊙ 2	21 PIN (2) (AUDIO VIDEO only) or S-V input. In case both of them are connected, S-VIDEO will be displayed.
-⊙ 1/Pos. No. (-⊙ 2/Pos. No.)	Is indicated when changed over automatically to VIDEO mode through connection to 21 PIN (1) or 21 PIN (2) while receiving 1st tuner.

Ⓑ **Indicates the position of the sub picture as well as the external input mode (yellow), with the mode being the same as that of the main picture.**

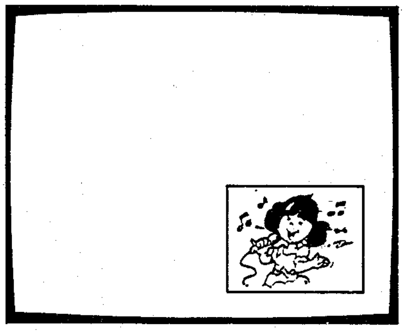
Ⓒ **Displaying sub picture**

The sub picture is displayed in four positions, i.e., upper righthand, lower righthand, upper lefthand and lower lefthand quadrants.

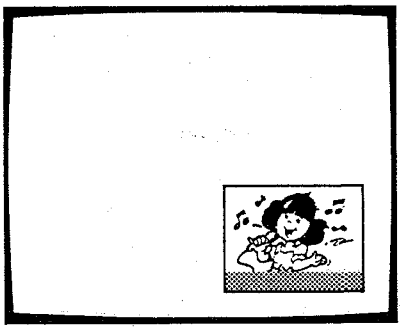
In case PinP is displayed in combination of on-air signals with VCR, video disk, etc., such phenomena may happen as sub picture is shrunk in vertical direction, lower portion of the picture is deficient, picture is elongated, or motion is intermittent on account of difference in broadcasting system.

For instance, when signals of PAL-B/G 50Hz are received as main picture with signals of 4.43NTSC 60Hz displayed as sub picture, PinP display will be as illustrated in the righthand figure due to the difference between 50Hz and 60Hz, which is not abnormal.

The same may take place when the main picture provides no signals.



Broadcasting systems are same
(synchronous)



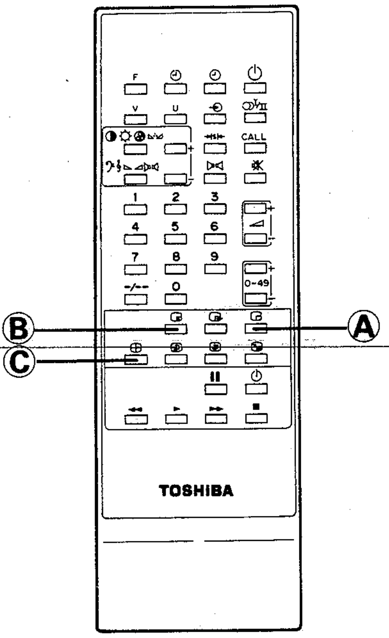
Broadcasting systems are different
(asynchronous)

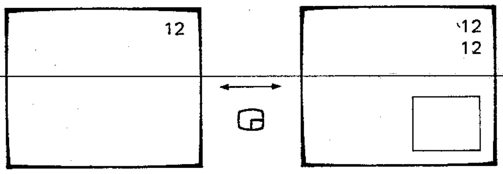
HOW TO OPERATE PinP

1 PinP Display

(1) Turning PinP display ON/OFF

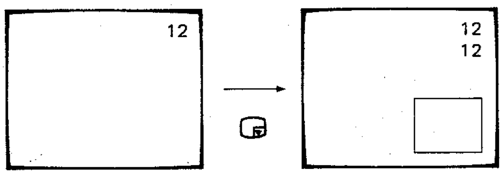
Depress ◲ button Ⓐ, and the PinP display will be turned on and off alternately.
4 PinP images of still picture turns into one such image of moving picture with OFF ~ ON operation.





(2) Taking PinP memorandum of main picture

Depress ◲ button Ⓑ, and PinP is turned on to display the still PinP image of the main picture.

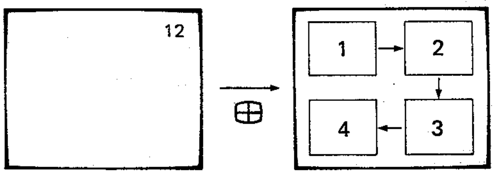


NOTE:

- Since 4-field reproduction is performed to achieve higher vertical resolution, pictorial image of violent action may be blurred.
- To turn off the display, depress ◲ button Ⓐ.

(3) Taking PinP memorandum of 4 continuous images of main picture

Depress ⊞ button Ⓒ, and PinP is turned on, displaying still image of the main picture in the sequence of upper lefthand, upper righthand, lower righthand and lower lefthand quadrants at a interval of 250 msec.



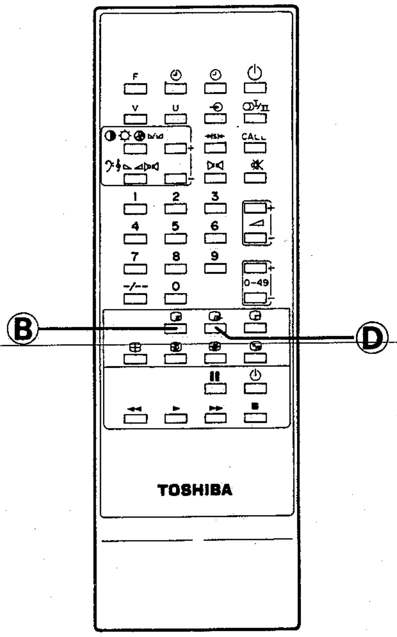
NOTE:

- As one-field reproduction is performed for each still picture, vertical resolution is slightly lowered.
- To turn off the display, depress ◲ button Ⓐ.

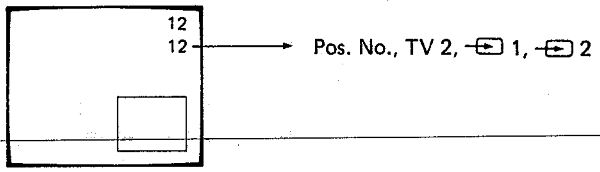
2 Function when PinP is on

(1) Switching input of sub picture

The input of sub picture can be switched as followed by depressing ▣ button Ⓓ.



TV ⟶ TV 2 ⟶ -⊕1 ⟶ -⊕2



If the switching of sub picture input is done, a 4-image display will automatically turn into one-image display.

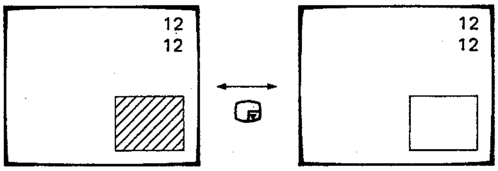
Sub picture cannot be received in RGB INPUT.

In case where 21 PIN inputs are applied when both main and sub pictures are in TV mode, main picture will enter the 21 PIN mode. However, sub picture will enter the 21 PIN mode in the event that 21 PIN input is given anew after a break upon entering 21 PIN mode for sub picture through swapping.

(2) Still picture

Still picture and moving picture are changed over alternately by depressing ▣ button Ⓑ.

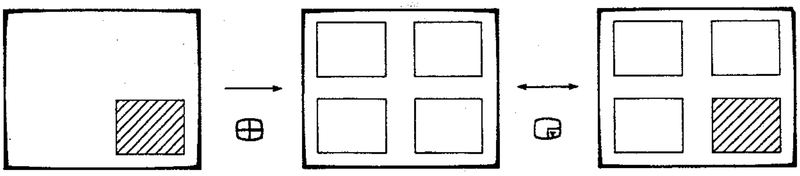
- In case of one-image display



Moving picture Still picture

- In case of 4-image display

You can perform the switching of still/moving pictures for the image placed before turning into 4-image display (when it is in one-image position).

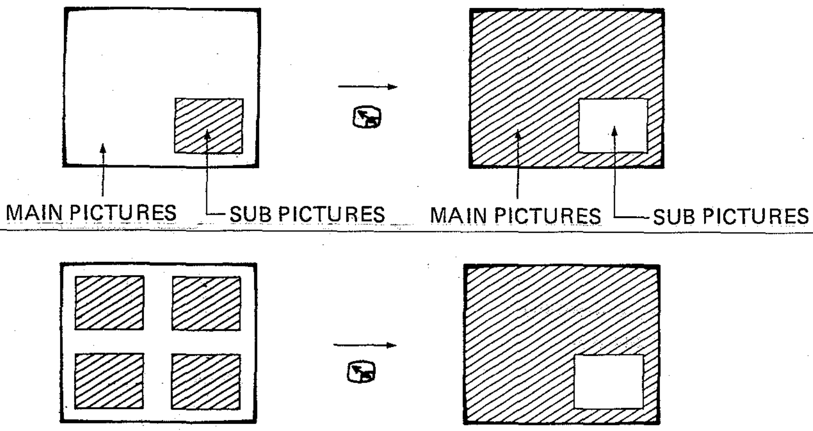


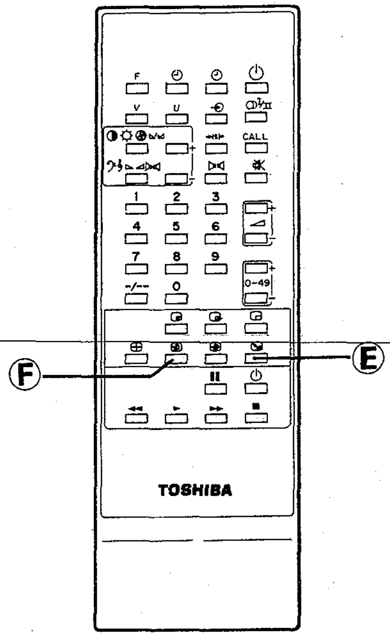
▨ Moving picture ☐ Still picture

(3) Interchange of main and sub pictures (SWAP)

Main and sub pictures can be interchanged by depressing ⧉ button Ⓔ.

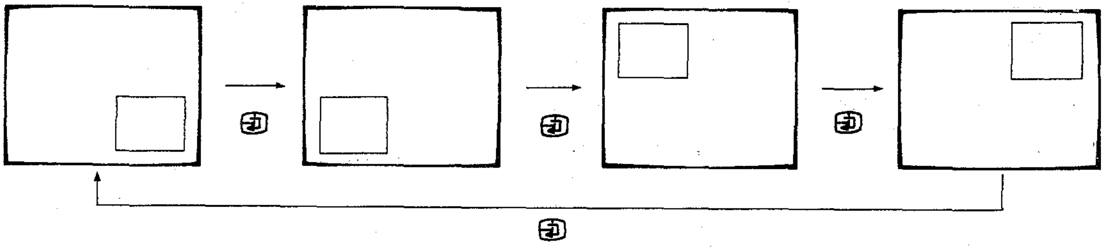
- The sound is heard only for the main picture.
- 4-image display turns into one-picture display.


MAIN PICTURES
SUB PICTURES
MAIN PICTURES
SUB PICTURES

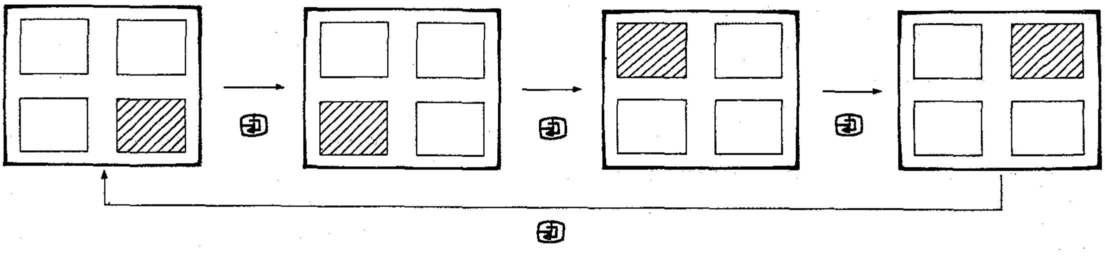

Ⓔ
Ⓕ
CALL
0-49
TOSHIBA

(4) Changing display position (LOCATION)

Display position is changed by depressing ⊡ button Ⓕ.



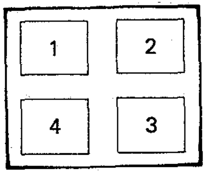
When displaying 4 images, one image is made moving, and the position of moving picture is changed.

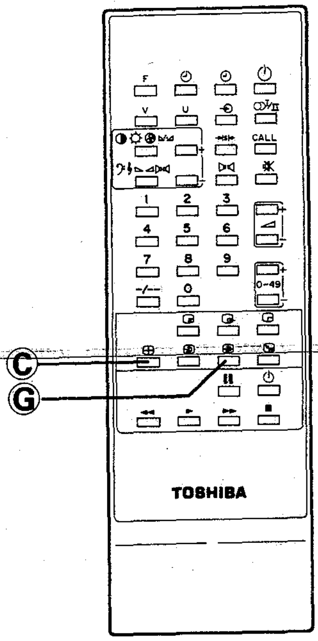


▨ Moving picture ☐ Still picture

(5) One shot strobo

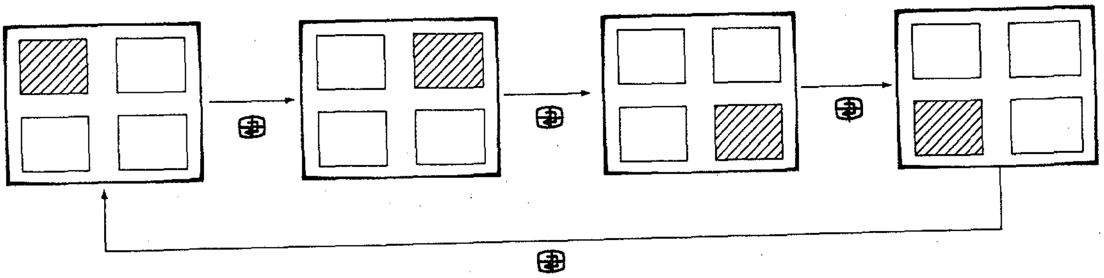
Still image of sub picture is displayed at an interval of 250 msec in the sequence of upper lefthand, upper righthand, lower righthand and lower lefthand quadrants, by depressing ⊞ button Ⓒ.





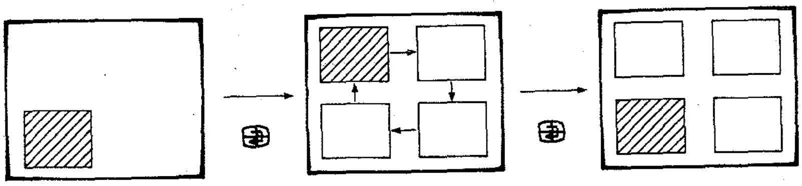
(6) Free strobo

Still image of sub picture is displayed continuously at an interval of 250 msec in the sequence of upper lefthand, upper righthand, lower righthand and lower lefthand quadrants, by depressing ⊞ button Ⓖ.



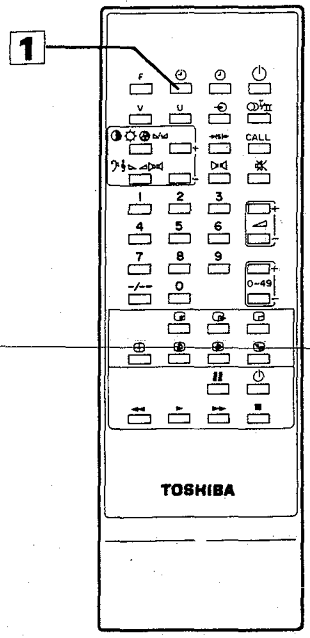
▨ Moving picture ☐ Still picture

If ⊞ button Ⓖ is depressed once more, the free strobe operation is halted to provide 3 images for still picture and one for moving pictures.
The position of the moving picture is the same as that of one-image display.



OFF TIMER OPERATION (Remote Control)

OFF-TIMER function is incorporated in a novel control system. You can set the TV to turn off automatically after elapse of a time up to 120 min. in minutes of tens and the time remaining before turning off a set can be displayed on the screen.
OFF-TIMER is operated solely with Remote Control Hand Unit.



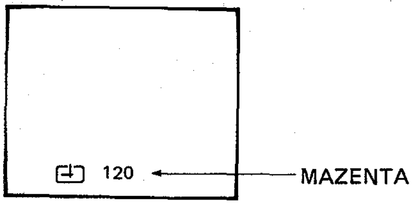
For example, if you wish to switch the TV set off after 120 min.

1. Depress TIMER/CLOCK Button $\boxed{1}$ to get into TIMER mode.
2. When this mode is entered, the remaining time at that point is displayed with the number of hundreds blinking. Put the numeral 1 there by use of 10 keys.
   Then the display of the numbers of tens and units will become 0 and the place of tens will start blinking. Set the numeral 2 in that place. You can not set the number of units (see the figure below).
3. After setting the time, depress the TIMER/CLOCK Button to get the timer starting. At the same time, the setting will be displayed in green colour for around 1 sec. With this button operation, the TIMER mode is released.

NOTE:

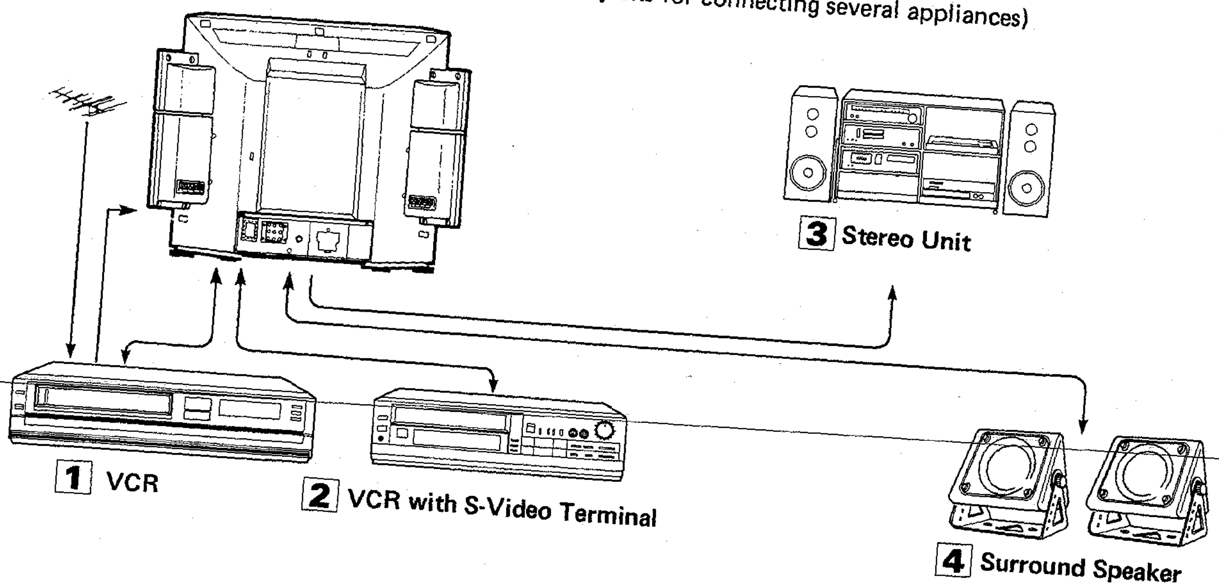
- To change the set time, depress the TIMER/CLOCK Button and set such time anew.
- The timer operation is cancelled by setting 000 so long as the OFF TIMER is started.
- Timer operation is also cancelled by turning the power off.

OFF TIMER display



EXTERNAL EQUIPMENT CONNECTIONS

Equipment connectable (This TV is provided with jacks for connecting several appliances)

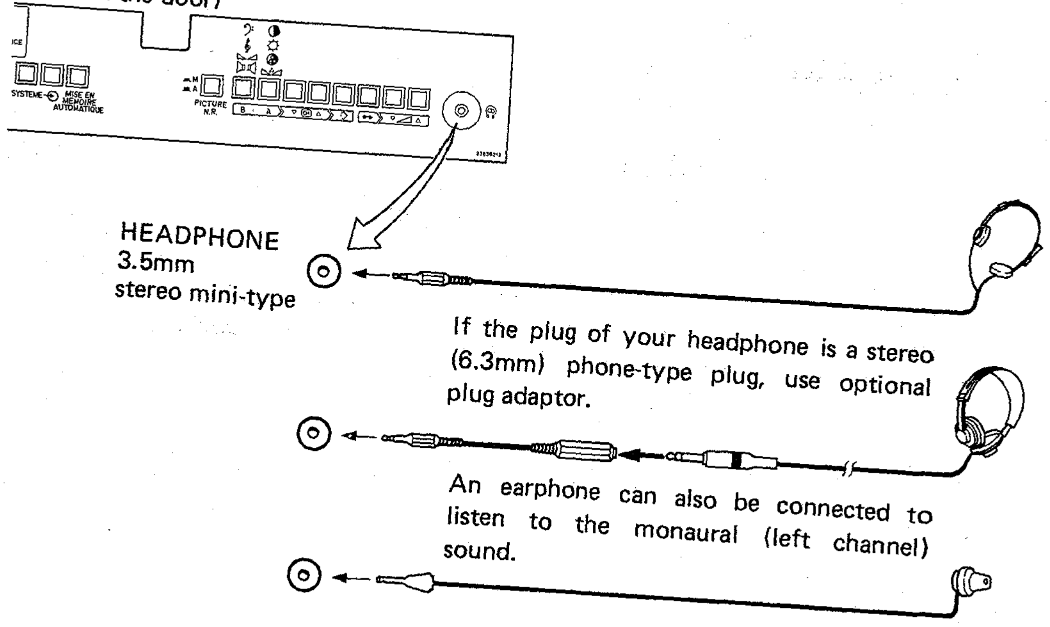

3 Stereo Unit
1 VCR
2 VCR with S-Video Terminal
4 Surround Speaker

- This TV receiver is equipped with video input and output terminals for 2 systems, audio output terminal, surround speaker terminal and S-video input terminal for your entertainment in combination with various appliances.
- Apart from the above, such appliances as video disk, BS tuner, and video outputting MSX personal computer can be connected to the video input terminals of this TV set.

USE OF HEADPHONE

For private listening, connect a headphone (optional) to the HEADPHONE jack.
The sound from the speakers will be cut off automatically.

(Behind the door)


MISE EN MEMOIRE AUTOMATIQUE
PICTURE N.R.
HEADPHONE
3.5mm
stereo mini-type

If the plug of your headphone is a stereo (6.3mm) phone-type plug, use optional plug adaptor.

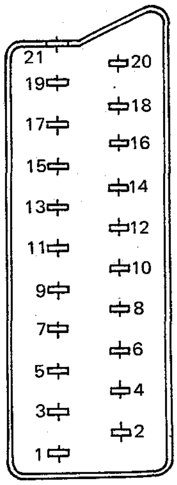
An earphone can also be connected to listen to the monaural (left channel) sound.

1 PERI-TELEVISION 21-PIN IN/OUT SOCKET (1),(2) (⊟→)

- There is located on the rear cover a "Peri" socket which may be used for a multitude of purposes as follows:

  Audio (Mono) input from radio, tape recorders, etc.
  Audio (Mono) output to Hi-Fi equipment.
  Video (Composite) input from cameras, games and recorders.
  Video (Composite) output to video recorder or monitor.
  R.G.B. input from cameras, games, computers, etc. (21 pin (1) only)

Also on rear panel there is a control marked ◫ this may be used to move picture left to right or right to left whichever may be necessary when using computer peripherals. When using "Peri" socket for the above purposes the TV-21 PIN/VIDEO switch should be placed in "TV-21 PIN" mode.



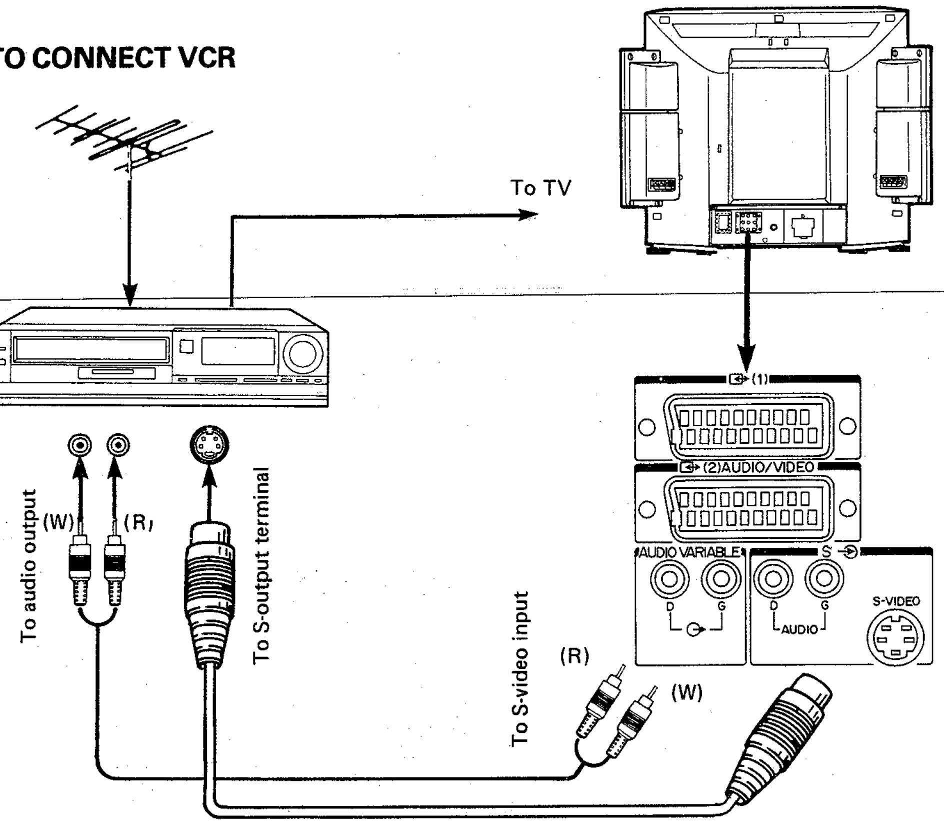
1.	Audio Out (R)	100m Vrms ±3dB	
2.	Audio In (R)	100m Vrms ±3dB	
3.	Audio Out (L)	100m Vrms ±3dB	
4.	Audio Earth		
5.	Blue Earth		
6.	Audio In (L)	100m Vrms ±3dB	
7.	Blue In	1Vp-p ±3dB	
8.	TV/Video Switch	TV: 0-1V, VIDEO: 10-12V	
9.	Green Earth		21 pin (1) only
10.	NC		
11.	Green In	1Vp-p ±3dB	21 pin (1) only
12.	NC		
13.	Red Earth		21 pin (1) only
14.	NC		
15.	Red In	1Vp-p ±3dB	21 pin (1) only
16.	Rapid Blanding Switching	TV: 0-0.4V, RGB: 1-3V	21 pin (1) only
17.	Video Earth		
18.	Rapid Blanking Earth	1Vp-p ±6dB – 3dB	21 pin (1) only
19.	Video Out	1Vp-p ±3dB	
20.	Video In		
21.	Shield Earth		

If TV-21 PIN/VIDEO switch is in "TV-21 PIN" mode and a +VE voltage is applied to Pin 8 then TV is switched to video automatically.
If TV-21 PIN/VIDEO switch is in "TV-21 PIN" mode or "VIDEO" mode and a +VE voltage is applied to Pin 16 then TV is set to receive RGB input. (21 pin (1) only)
For guidance in using 21 pin 'PERI' socket please consult your local Toshiba dealer.

2 WHEN CONNECTING VCR PROVIDEO WITH S-VIDEO TERMINAL

- High quality picture can be viewed by connecting VCR provided with S-video terminal.

HOW TO CONNECT VCR



When recording	When playing back
1 Select the TV program to be recorded on the side of VCR to put it in the recording position. 2 To monitor the recording condition, put the TV set in "VIDEO 2" mode by pressing VIDEO button on the TV.	1 Get into "VIDEO 2" mode by pressing VIDEO button on the TV set. 2 Set VCR in the play-back position. **Note:** To view a TV program after play-back, put it in the "TV" position by pressing the TV/VIDEO button.

To record background TV program

1 Set the VCR in the recording position by taking the steps as mentioned in the above "When recording."

2 Press the TV/VIDEO SELECTION button of VCR to put it into "TV" mode.

3 You may view TV program as you like by pressing CHANNEL button of the TV.

NOTE:

- This connecting arrangement is confined to the VCR with S-video terminal. For VCRs in general, use the connection as illustrated in the preceeding page.
- S-video terminal is a separate YC signal terminal.
- Do not use the video terminal of the video input (VIDEO INPUT 2) terminal concurrently with the S-video input terminal.
- Use audio terminal of the video terminal of the video input (VIDEO INPUT 2).
- Be sure to read the "Operation Manual " of the VCR you use as well.

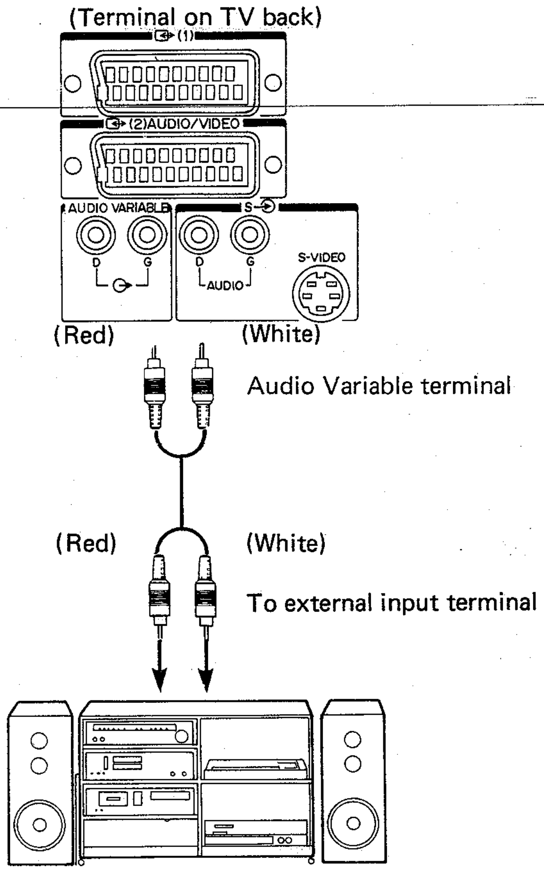
EXTERNAL EQUIPMENT CONNECTION (Stereo Unit)

3 WHEN CONNECTING STEREO UNIT

This connecting arrangement provides you with high quality picture of the TV set plus impressive sound of stereo unit.

Example: When using TV output terminal

- Sound volume is adjusted by Volume Control of TV set.


(Terminal on TV back)
(1)
(2)AUDIO/VIDEO
AUDIO VARIABLE
S-
D
G
D
G
AUDIO
S-VIDEO
(Red)
(White)
Audio Variable terminal
(Red)
(White)
To external input terminal

Stereo unit

NOTE:

- To avoid machine trouble, never use a set of speakers commonly for TV and stereo unit.
- Please read the "Operation Manual" of the stereo unit you use as well.

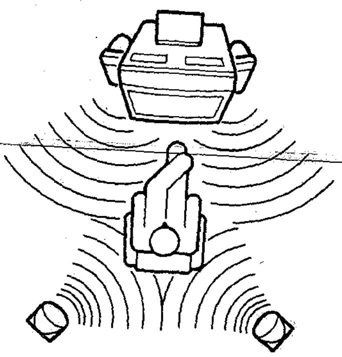
EXTERNAL EQUIPMENT CONNECTION (Surround Speaker)

4 WHEN ENJOYING STILL HIGHER SURROUND EFFECT

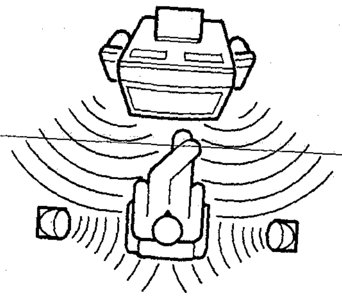
- In addition to TV programs, video or video disks can be enjoyed, by connecting the surround speakers or speakers available with you (2 pcs., 8 ohms, 4 watts or higher), at realistic sound.

POSITIONING SURROUND SPEAKERS EFFECTIVELY

Positioned behind you.

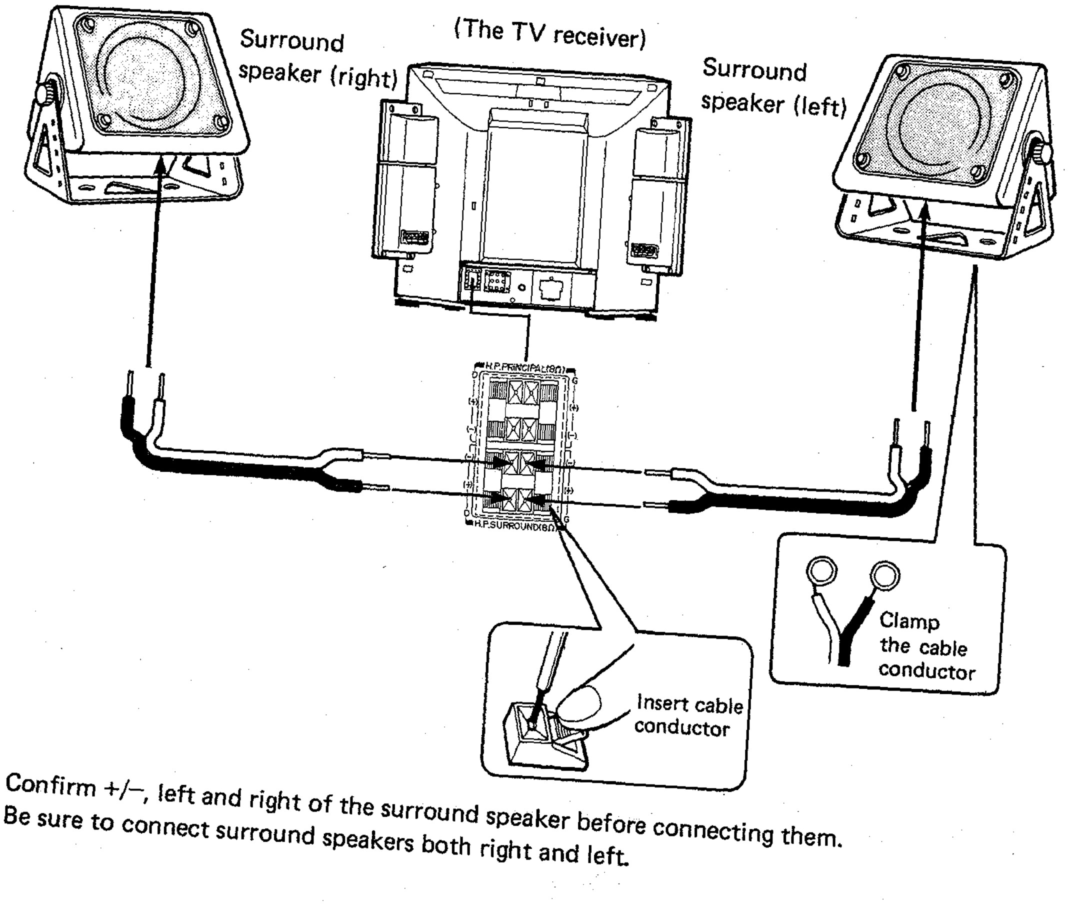


Positioned on your sides.



HOW TO CONNECT:

Recommended speaker SX-Z01 (optional)


Surround speaker (right)
(The TV receiver)
Surround speaker (left)
H.P.PRINCIPAL(8Ω)
H.P.SURROUND(8Ω)
Insert cable conductor
Clamp the cable conductor

- Confirm +/–, left and right of the surround speaker before connecting them.
- Be sure to connect surround speakers both right and left.

Cautions

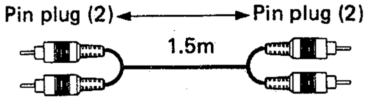
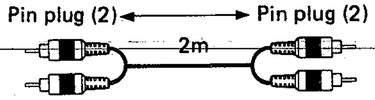
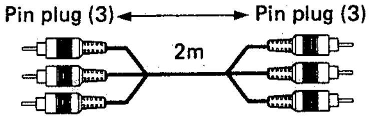
- The surround speaker terminals can not be connected to audio amplifier.
- When using speakers other than the recommended, "magnetism protected" type should be used to prevent unevenness in colour.

OPTIONAL ACCESSORIES

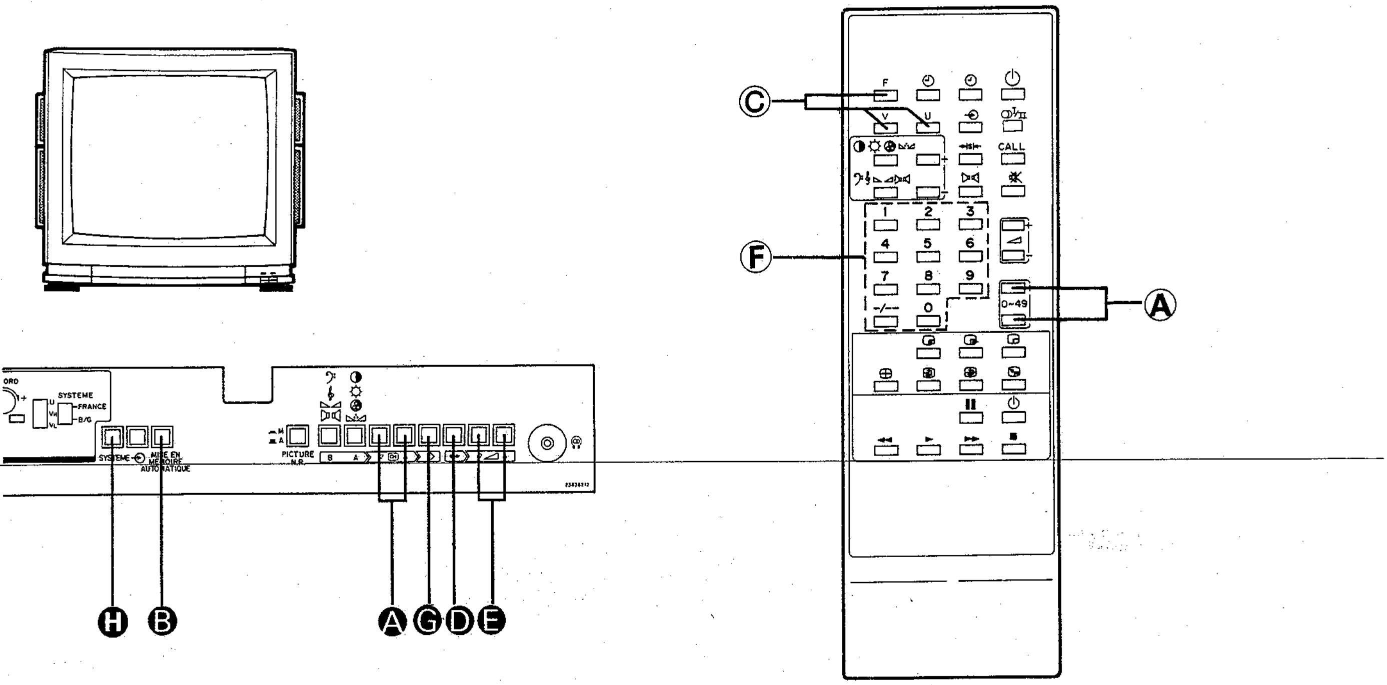
OPTIONAL ACCESSORIES ARE AVAILABLE FOR VARIOUS COMBINATION OF ENTERNAL EQUIPMENT CONNECTIONS.

- When connecting video/audio equipment to this TV set, you can choose the optional parts as shown below.

CONNECTING CORD

For audio (stereo)	Type TSC-21	 Pin plug (2) Pin plug (2) 1.5m
For video/audio (monaural)	Type TSC-V10	 Pin plug (2) Pin plug (2) 2m
For video/audio (stereo)	Type TSC-V09	 Pin plug (3) Pin plug (3) 2m

CHANNEL MEMORIZATION



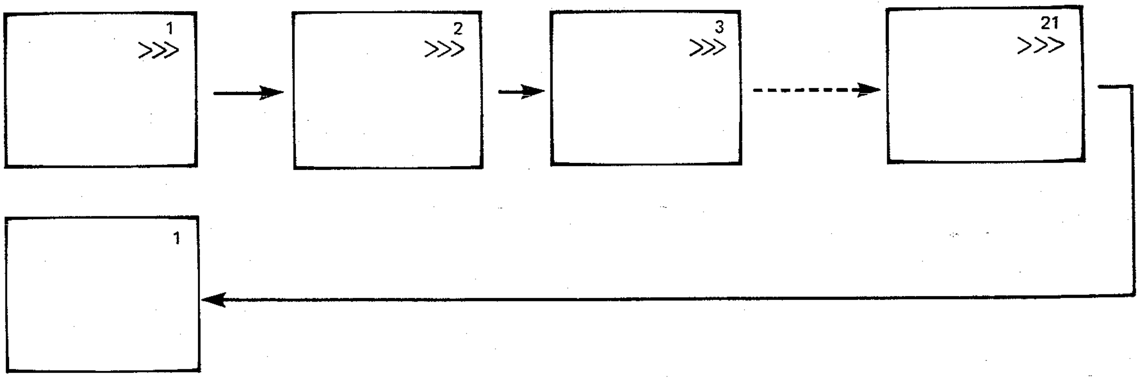
This TV receiver can memorize 50 channels of station on the desired position number, 3 ways of channel memorization are prepared; namely ASM, U/V SEARCH and MFT.

1 TO MEMORIZE ALL CHANNELS IN SEQUENCE AUTOMATICALLY

ASM: Free position Auto Search Memory

For example, to memorize channels from the position 1 automatically:

1. Select the position 1 with the DIRECT POSITION Button Ⓕ on remote hand unit or the CHANNEL UP/DOWN Button Ⓐ Ⓐ on TV receiver.
2. Set the system by system button Ⓗ.
   FRANCE ..... SECAM-L
   MULTI ..... PAL, SECAM, B/G, I, D/K)
3. Press once the AUTO SEARCH MEMORY Button Ⓑ on the TV, and all active channels (stations) in you area are automatically memorized on the positions from smaller number to larger one in sequence.
   During the operation of AUTO SEARCH MEMORY, ">>>" are indicated with flickering in 0.2 seconds interval.



4. After all channels are memorized, the search goes to the position 20 and returns to the position 1 to end the operation.
5. When you desire to memorize the same contents to the position 21 and larger, select the position 21 and press the AUTO SEARCH MEMORY Button Ⓑ again. After the channels are memorized, the search goes to the position 49 and returns to the position 21 to end the operation.

2 TO MEMORIZE THE DESIRED CHANNEL ON A CERTAIN POSITION

V/U SEARCH

For example: The channel 3 on the position 3

(1) Select the position 3 with the DIRECT POSITION Button Ⓕ on the remote hand unit or the CHANNEL UP/DOWN Button 🅐 Ⓐ on the TV.

(2) Press together the F and V Buttons Ⓒ on the remote hand unit.
Search begins on the position 3.

(3) Press repeatedly the F and V Buttons Ⓒ until the desired channel 3 is received on the screen.

(4) When you desire to memorize the UHF channels, in the above procedure, press the F and U Buttons Ⓒ together.

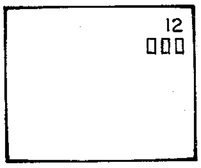
(5) During the search operation, ">>>" is indicated with flickering in 0.2 seconds interval.
When the search reaches to the lowest frequency of TV VHF/UHF band, the search stops and ">>>" will be indicated continuously (not flickering).
In this case, press the F and V Buttons Ⓒ or the F and U Buttons Ⓒ again to restart the search operation.

3 FINE TUNING

If the receiving condition in your area is poor, the detuning adjustment may be recommended for better viewing with the FINE TUNING Button.

Note: In the fine tuning mode, receiving picture may deviate slightly, because the automatic frequency control is deactivated.
At that time, readjust the fine tuning to correct the deviation.

(1) Press the MFT (Manual Fine Tuning) Button 🅓 on the TV.
"□□□" is indicated under the position number display.



(2) Press the VOLUME UP/DOWN Button 🅔 to adjust the picture for better one.

(3) If MEMORY button 🅖 is pressed while "□□□" is displayed, the tuning level of that time is stored.

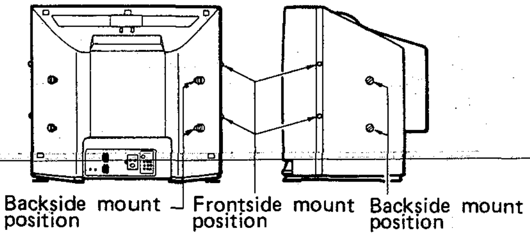
(4) The fine tuning mode is released with the POSITION Button, TV/VIDEO Button or POWER ON/OFF Button pressed.

HOW TO MOUNT SPEAKERS

1 TAKE OUT THE SPEAKER FROM THE PACKING BOX

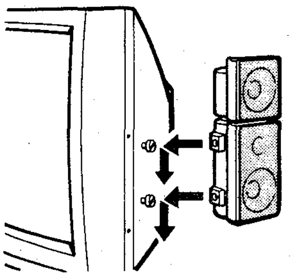
2 DECIDE WHERE TO MOUNT THE SPEAKERS

- The setting screws on the TV are positioned for backside mounting when the TV is shipped from the factory.


Backside mount position
Frontside mount position
Backside mount position

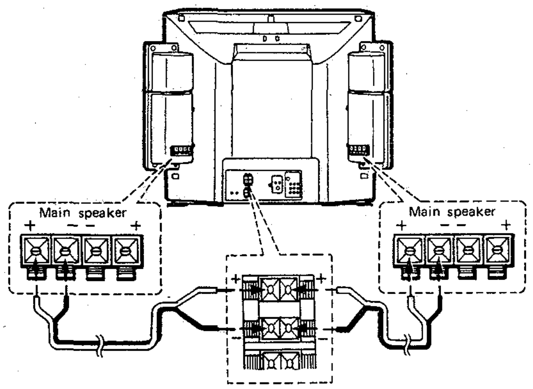
- When mounting on the frontside, remove rubber plugs at the front, and remove the setting screws at the back to put them on the front side. Insert rubber plugs at the rear.

3 MOUNT THE SPEAKERS BOTH LEFT AND RIGHT



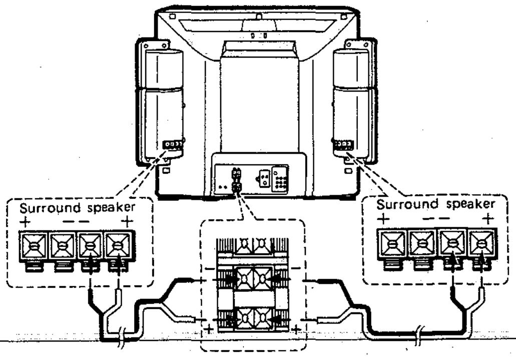
- Check for the right and left of the speakers, align the setting holes of the speaker to the setting screws, and press the speaker downward for fixing.

4 CONNECT THE FRONT SPEAKER


Main speaker
+ − − +
Main speaker
+ − − +
+
+

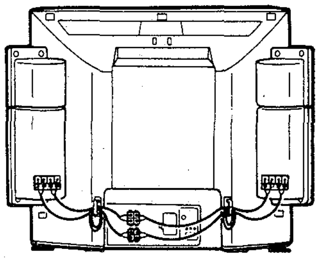
- Check for positive and negative polarities and right and left sides of the speakers before connecting them.

5 CONNECT THE SURROUND SPEAKER


Surround speaker
+ − − +
Surround speaker
+ − − +
+
+

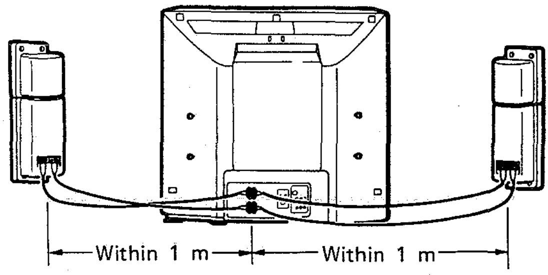
- Check for positive and negative polarities and right and left sides of the speakers before connecting them.

6 WHEN ARRANGING LEAD WIRES



- Arrange the lead wires by using the lead retainer on the back of TV.

THE SPEAKERS CAN BE SEPARATED


Within 1 m
Within 1 m

※ The surround speakers can be adjusted in the angle (to enhance the surround effect).

■ **When dismounting, the speaker is removed from the setting screw of the receiver, by pulling it upward.**

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" , "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

~~This receiver is shipped completely in cardboard~~ carton. Carefully draw out the receiver from the carton and remove all packing materials.

Plug the power cord into a convenient 175 ~ 270 Volts 50Hz AC two pin power outlet.

Turn the receiver ON and adjust the FINE TUNING for best picture detail with the AFC turned OFF.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least 10 minutes in order that the automatic degaussing circuit operates properly.

Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

+145 VOLT POWER SUPPLY ADJUSTMENT (R851)

CAUTION: +B voltage closely relates to the high voltage.

To prevent hazardous X-RAY RADIATION, the +B voltage must be properly adjusted to +145 volts.

1. Tune in an active channel. Adjust the BRIGHTNESS and CONTRAST Controls for normal picture.
2. Check that the AC power Line voltage is normal. (AC 220 volts, 50 Hz)
3. Connect a VTVM between L805 on POWER Board and chassis ground.
4. Adjust the +B ADJ. (R851) on POWER Board for + 145 volts reading. Remove the VTVM.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. ~~High voltage will be measured below 32kV.~~
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 32kV under any conditions.

HEIGHT ADJUSTMENT

HEIGHT Control (R351) on MAIN Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

HORIZONTAL CENTER ADJUSTMENT

1. Receive the WG PHILIPS pattern.
2. Set the contrast and colour to minimum, and the bringhtness to maximum.
3. Adjust H. CENTER Control (R451) so the pattern center can be located at the screen center.

PICTURE WIDTH AND DISTORTION ADJUSTMENT (Width, Pincushion Distortion, Trapezoid Distortion)

1. Perform this adjustment after +B and H. CENTER adjustment are completed.
2. Receive the WG PHILIPS pattern.
3. Set the contrast and colour to minimum, and the brightness to maximum.
4. Adjust H. WIDTH Control (R358) for the horizontal width so that the white flags on left and right of the pattern are just hidden.
5. Adjust DPC Control (R359) to correct the vertical line on left and right straight.
6. Adjust KEYSTONE Control (R356) to correct the trapezoid distortion.
7. Readjust WIDTH Control (R358) for the precision.

BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal Pin 2 of LM02.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. **(See figure 1.)**

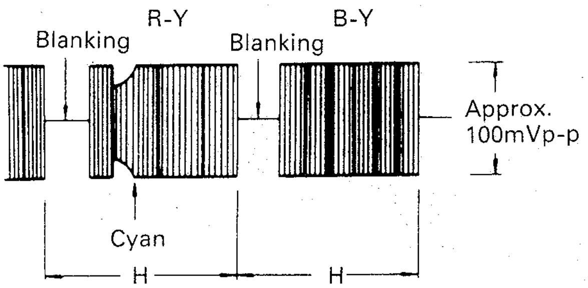


Figure 1.

IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Leave the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 62 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. **(See figure 2.)**
5. Then change the connection of synchroscope from the pin 62 to the pin 60 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. **(See figure 3.)**

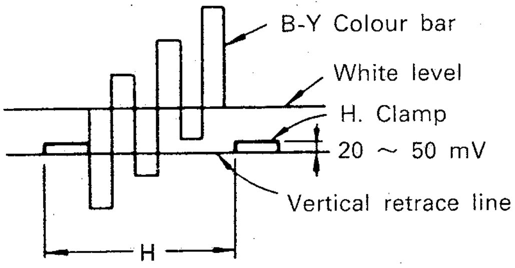


Figure 2.

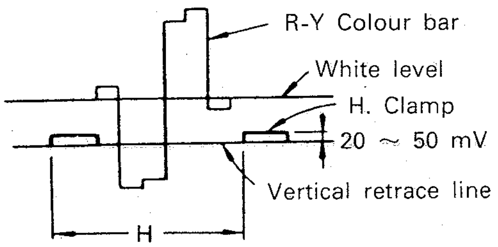


Figure 3.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme PAL Philips pattern.
2. Set the COLOUR Control VR. to obtain the proper colour.
3. If the PAL MATRIX adjustment is in correct, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. Remove the capacitor, and if the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear when the capacitor is connected.

SIF DET. ADJUSTMENT L674 FOR 6.0MHz

1. Supply +12V to the System Switch Board.
2. Connect 10k ohm resistor between pin 18 of IC670 and ground.
3. Supply +3V DC to terminal "TP-14" on Main Board through 100 ohm resistor.
4. Connect the 6.0MHz signal (Modulation: 400Hz/ 15kHz deviation, 100dBμ) of SIF S.G. to pin 2 of IC674 through a capacitor 0.01uF.
5. Connect the millivoltmeter to pin 9 of IC674.
6. Adjust L674 for the maximum reading on the meter.

C651 FOR 4.5MHz

1. Supply +12V to the System Switch Board.
2. Connect 10k ohm resistor between pins 18 and 22 of IC670.
3. Supply +3V DC to terminal "TP-14" on Main Board to deactivate PIF circuit.
4. Connect the 4.5MHz signal (Modulation: 400Hz/ 7.5kHz deviation, 100dBμ) of SIF S.G. to pin 2 of IC674 through a capacitor 0.01uF.
5. Connect the millivoltmeter to pin 9 of IC674.
6. Adjust the variable capacitor (C651) for the maximum reading on the meter.

SIF DET. ADJUSTMENT 6.0MHz OSC. COIL (L672)

1. Supply +12V to the System SW. Board.
2. Short the C677 (R693 side) through a 10k ohm resistor to ground.
3. Apply the 6.0MHz signal (No modulation, 100dBμ) of SIF S.G. to pin 12 of IC670 through a capacitor 0.01uF..
4. Connect oscilloscope to pin 9 of ICS01.
5. Adjust L672 so that the response on oscilloscope can be maximum.

SIF DET. ADJUSTMENT 5.5MHz OSC. COIL (L671)

1. Supply +12V to the SYSTEM SW. Board.
2. Supply +9V to Anode of D304 through 10k ohm resistor.
3. Apply the 5.5MHz signal (No modulation, 100dBμ) of SIF S.G. to pin 27 of IC670 through a capacitor 0.01uF.
4. Connect oscilloscope or DC voltmeter to C677 (R693 side.)
5. Adjust L671 so that the response on oscilloscope or DC voltmeter can become +4.5V.

COLOUR PURITY ADJUSTMENT

Note: Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes. Purity adjustment requires Rubber Wedge kit.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Turn the CONTRAST and BRIGHTNESS Controls to maximum.
3. Adjust RED and BLUE CUT OFF controls (R557 and R559) to provide only a green raster. Advance the GREEN CUT OFF control (R558) if necessary.
4. Loosen the clamp screw holding the yoke, and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet around the neck of the picture tube until a green belt is obtained in the centre of the screen. And at the same time, centre the raster vertically by adjusting the magnet.
7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw.
8. Check the purity of the red and blue raster by adjusting the CUT OFF Controls.
9. Tighten the clamp screw of the yoke temporarily.
10. Obtain a white raster, referring to "CRT GREY SCALE ADJUSTMENT".
11. Proceed with convergence adjustment.

CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Turn the SCREEN Control (on T461) fully counterclockwise.
3. Set the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) to the mid position.
4. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
5. Set the SERVICE SW. (S202) in the H. line position.
6. Set the CONTRAST, COLOUR Controls to minimum and BRIGHTNESS Control to centre position.
7. Rotate the SCREEN Control gradually clockwise until the first line appears slightly on the screen.
   Then turn fully counterclockwise the two CUT OFF Controls corresponding to the colours of the first and the second horizontal lines to eliminate the lines.
8. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen.
   Set the SCREEN Control to this position.
   At the base of the colour, rotate the remaining two CUT OFF Controls gradually clockwise until the horizontal lines of each colour appear sightly on the screen.
9. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE).
   The lines may look like white if the CUT OFF Controls are adjusted properly.
10. Return the SERVICE SW. (S202) in the receiving position.
11. Set the BRIGHTNESS Control to the maximum and COLOUR Control to the minimum.
12. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
13. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the maximum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the centre.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT.
   Control again for the acceptable picture.

CONVERGENCE ADJUSTMENTS

Note: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ Centre Convergence Adjustment

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them and superimpose red and blue vertical lines in the centre area of the picture screen.
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen.
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 with understanding red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual affection and it makes dots movement complex.

■ Circumference Convergence Adjustment

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in the figure temporarily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference.
   Push the mounted wedge into the space between picture tube and yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference.
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick 3 adhesive tapes on wedges.

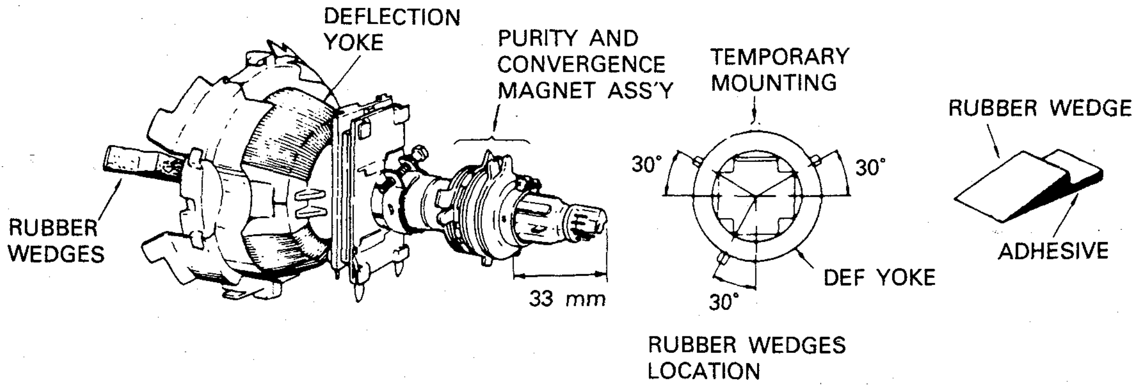
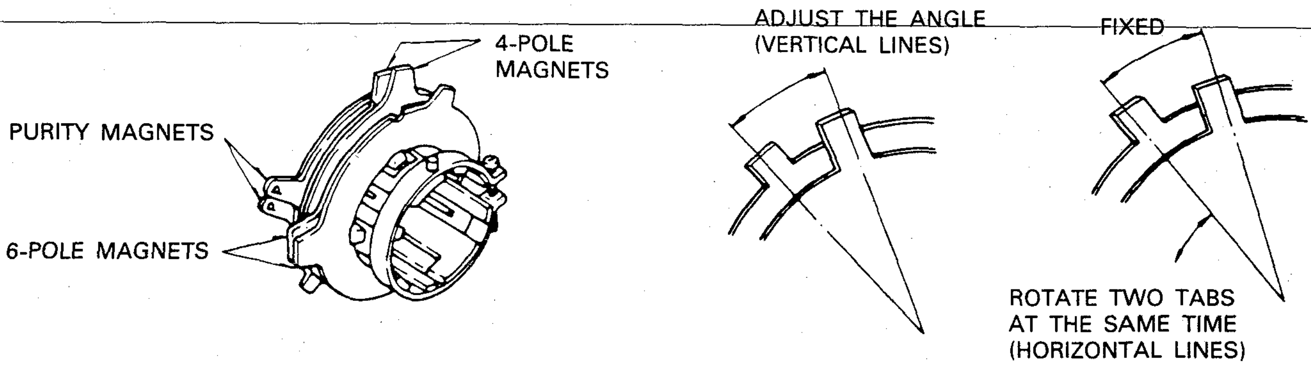

DEFLECTION YOKE
PURITY AND CONVERGENCE MAGNET ASS'Y
TEMPORARY MOUNTING
RUBBER WEDGE
30°
30°
RUBBER WEDGES
33 mm
30°
DEF YOKE
ADHESIVE
RUBBER WEDGES LOCATION

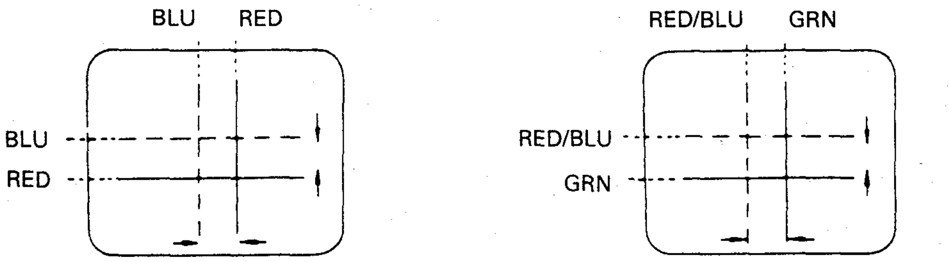
Figure 4.


4-POLE MAGNETS
PURITY MAGNETS
6-POLE MAGNETS
ADJUST THE ANGLE (VERTICAL LINES)
FIXED
ROTATE TWO TABS AT THE SAME TIME (HORIZONTAL LINES)

COVERGENCE MAGNET ASSEMBLY

ADJUSTMENT OF MAGNETS

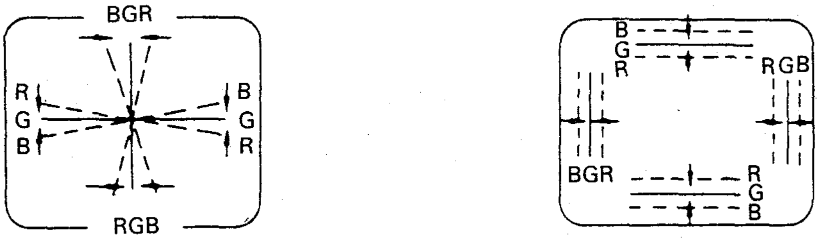
Figure 5.


BLU
RED
BLU
RED
RED/BLU
GRN
RED/BLU
GRN

4-POLE MAGNETS MOVEMENT

6-POLE MAGNETS MOVEMENT

Center Convergence by Convergence Magnets


BGR
R
G
B
B
G
R
RGB
B
G
R
RGB
BGR
R
G
B

INCLINE THE YOKE UP(OR DOWN)

INCLINE THE YOKE RIGHT(OR LEFT)

Circumference Convergence by DEF Yoke

Figure 6. Dot Movement Pattern.

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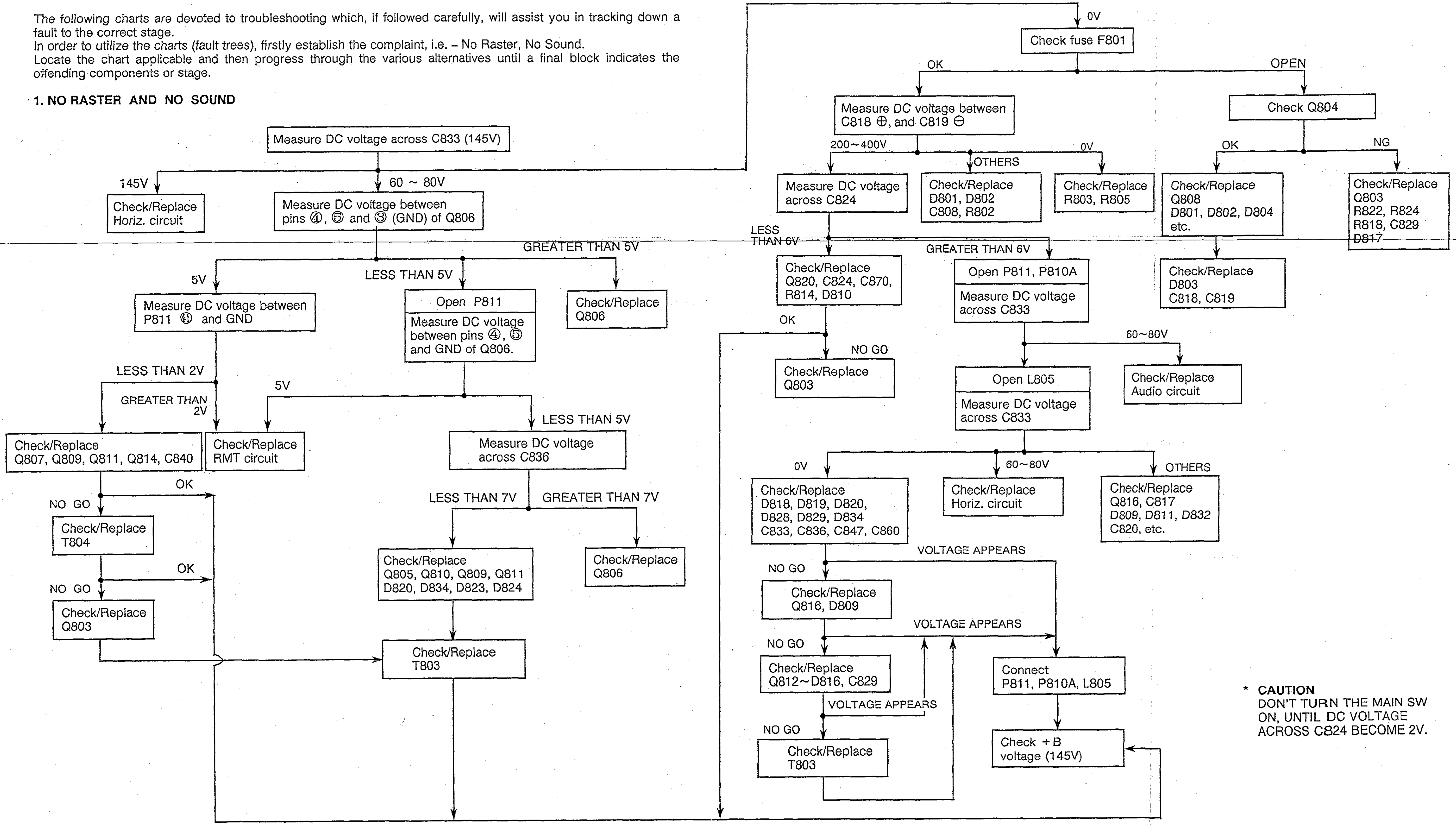
TROUBLESHOOTING CHARTS

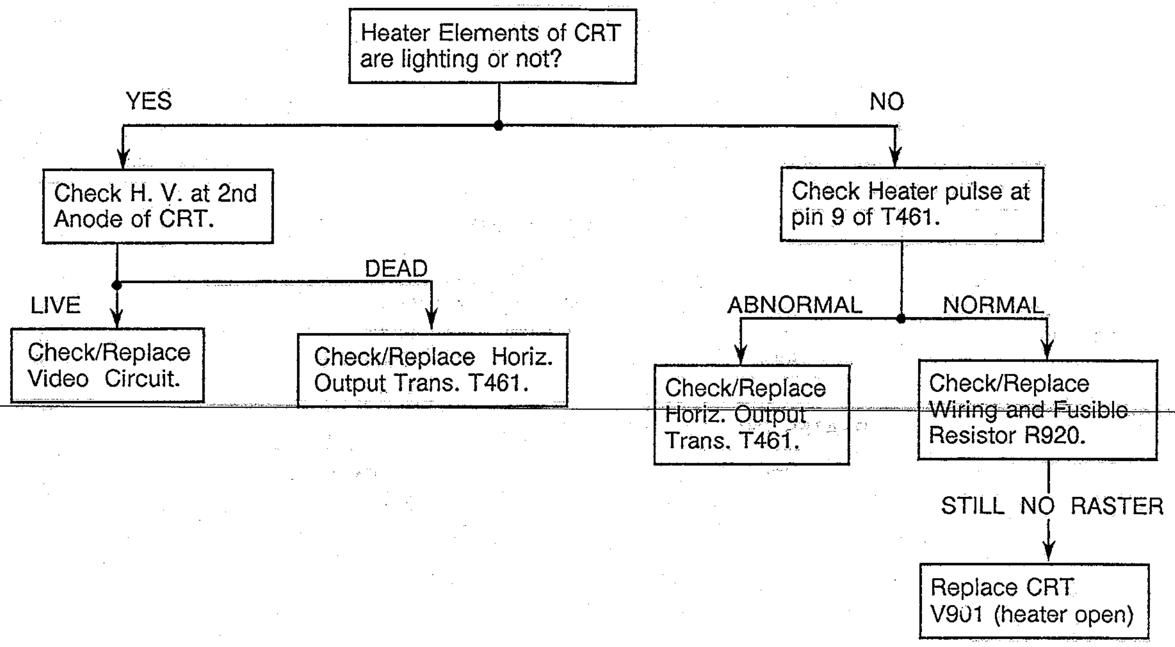
The following charts are devoted to troubleshooting which, if followed carefully, will assist you in tracking down a fault to the correct stage.
In order to utilize the charts (fault trees), firstly establish the complaint, i.e. – No Raster, No Sound.
Locate the chart applicable and then progress through the various alternatives until a final block indicates the offending components or stage.

1. NO RASTER AND NO SOUND


Measure DC voltage across C833 (145V)
145V
Check/Replace Horiz. circuit
60 ~ 80V
Measure DC voltage between pins ④, ⑤ and ③ (GND) of Q806
GREATER THAN 5V
5V
LESS THAN 5V
Measure DC voltage between P811 ④ and GND
Open P811
Measure DC voltage between pins ④, ⑤ and GND of Q806.
Check/Replace Q806
LESS THAN 2V
GREATER THAN 2V
5V
LESS THAN 5V
Check/Replace Q807, Q809, Q811, Q814, C840
Check/Replace RMT circuit
Measure DC voltage across C836
OK
NO GO
Check/Replace T804
LESS THAN 7V
GREATER THAN 7V
OK
NO GO
Check/Replace Q805, Q810, Q809, Q811 D820, D834, D823, D824
Check/Replace Q806
Check/Replace Q803
Check/Replace T803
0V
Check fuse F801
OK
OPEN
Measure DC voltage between C818 ⊕, and C819 ⊖
Check Q804
200~400V
OTHERS
0V
OK
NG
Measure DC voltage across C824
Check/Replace D801, D802 C808, R802
Check/Replace R803, R805
Check/Replace Q808 D801, D802, D804 etc.
Check/Replace Q803 R822, R824 R818, C829 D817
LESS THAN 6V
GREATER THAN 6V
Check/Replace Q820, C824, C870, R814, D810
Open P811, P810A
Measure DC voltage across C833
Check/Replace D803 C818, C819
OK
NO GO
60~80V
Check/Replace Q803
Open L805
Measure DC voltage across C833
Check/Replace Audio circuit
0V
60~80V
OTHERS
Check/Replace D818, D819, D820, D828, D829, D834 C833, C836, C847, C860
Check/Replace Horiz. circuit
Check/Replace Q816, C817 D809, D811, D832 C820, etc.
VOLTAGE APPEARS
NO GO
Check/Replace Q816, D809
VOLTAGE APPEARS
NO GO
Check/Replace Q812~D816, C829
Connect P811, P810A, L805
VOLTAGE APPEARS
NO GO
Check/Replace T803
Check +B voltage (145V)

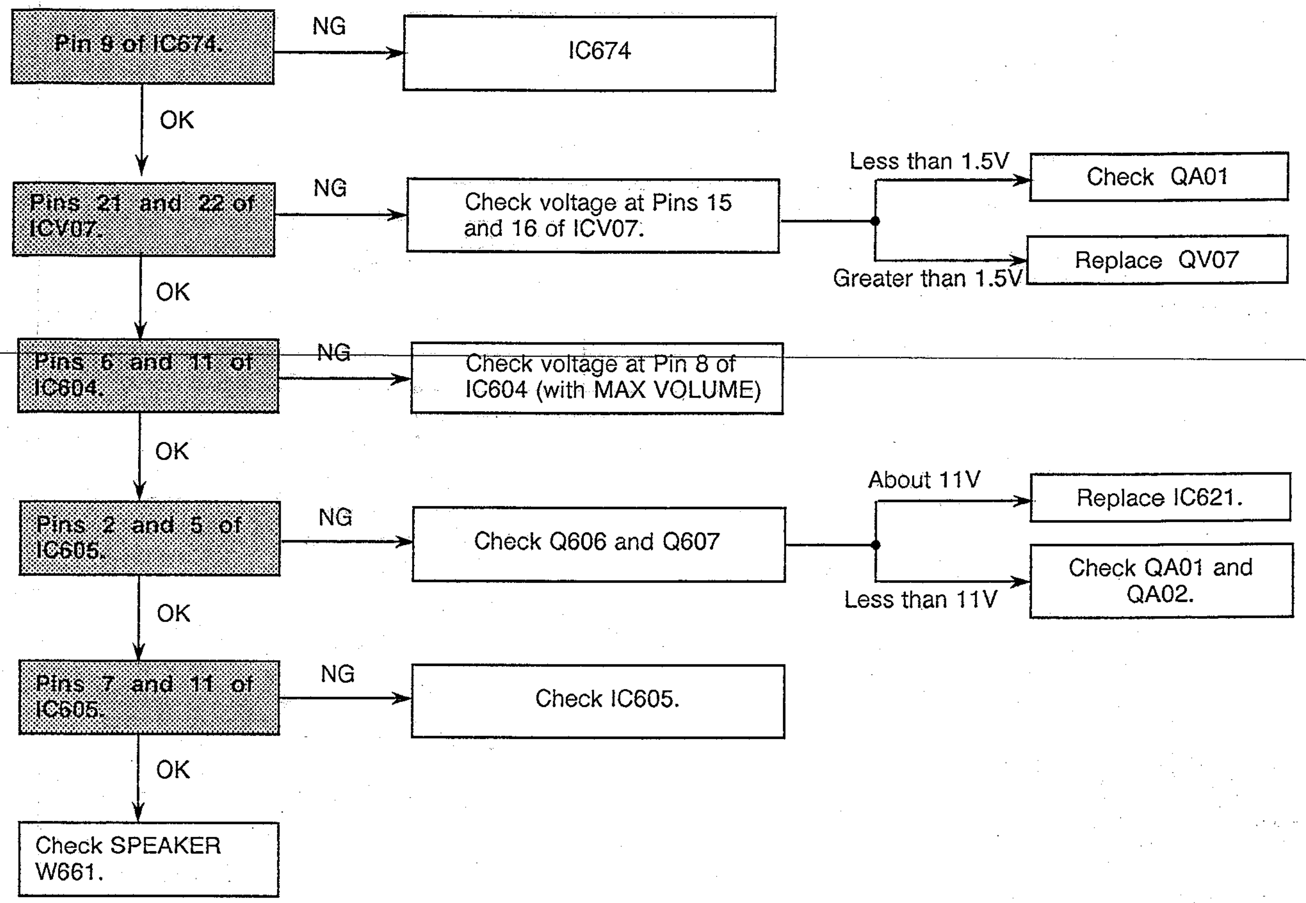
* **CAUTION**
DON'T TURN THE MAIN SW ON, UNTIL DC VOLTAGE ACROSS C824 BECOME 2V.

2. NO RASTER (SOUND OK)


Heater Elements of CRT are lighting or not?
YES
NO
Check H. V. at 2nd Anode of CRT.
Check Heater pulse at pin 9 of T461.
LIVE
DEAD
Check/Replace Video Circuit.
Check/Replace Horiz. Output Trans. T461.
ABNORMAL
NORMAL
Check/Replace Horiz. Output Trans. T461.
Check/Replace Wiring and Fusible Resistor R920.
STILL NO RASTER
Replace CRT V901 (heater open)

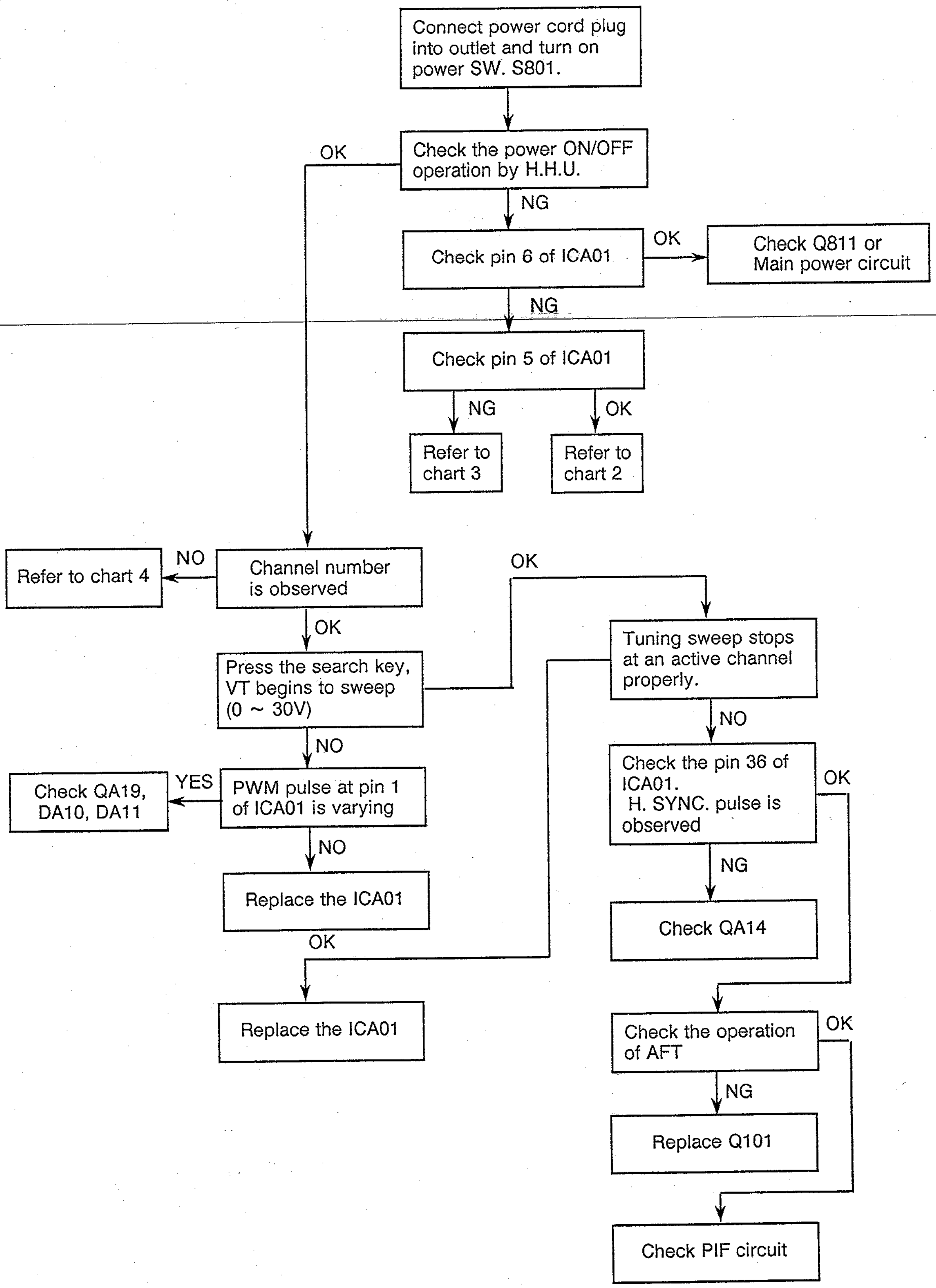
3. NO SOUND

NOTE: Check the sound signal waveform for shaded area below.


Pin 9 of IC674.
NG
IC674
OK
Pins 21 and 22 of ICV07.
NG
Check voltage at Pins 15 and 16 of ICV07.
Less than 1.5V
Check QA01
Greater than 1.5V
Replace QV07
OK
Pins 6 and 11 of IC604.
NG
Check voltage at Pin 8 of IC604 (with MAX VOLUME)
OK
Pins 2 and 5 of IC605.
NG
Check Q606 and Q607
About 11V
Replace IC621.
Less than 11V
Check QA01 and QA02.
OK
Pins 7 and 11 of IC605.
NG
Check IC605.
OK
Check SPEAKER W661.

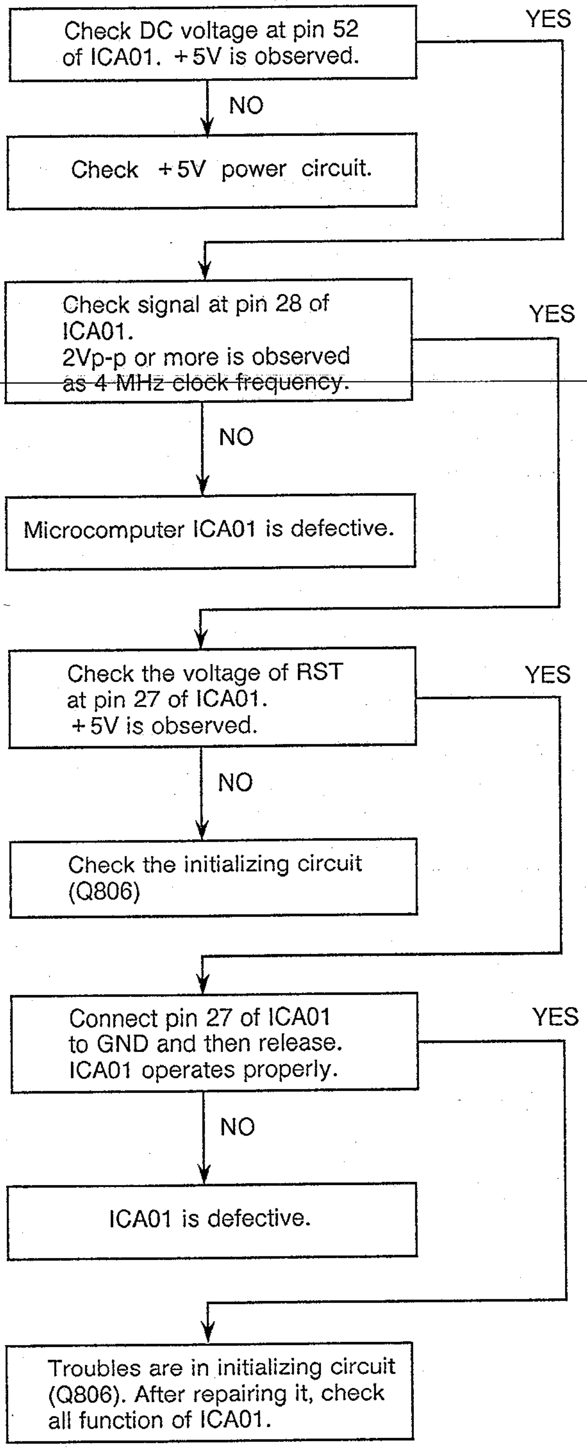
4. CHANNEL SELECTOR TROUBLE

[CHART 1]


Connect power cord plug into outlet and turn on power SW. S801.
Check the power ON/OFF operation by H.H.U.
OK
NG
Check pin 6 of ICA01
OK
Check Q811 or Main power circuit
NG
Check pin 5 of ICA01
NG
OK
Refer to chart 3
Refer to chart 2
Refer to chart 4
NO
Channel number is observed
OK
OK
Press the search key, VT begins to sweep (0 ~ 30V)
Tuning sweep stops at an active channel properly.
NO
NO
Check QA19, DA10, DA11
YES
PWM pulse at pin 1 of ICA01 is varying
Check the pin 36 of ICA01. H. SYNC. pulse is observed
OK
NO
Replace the ICA01
NG
Check QA14
OK
Replace the ICA01
Check the operation of AFT
OK
NG
Replace Q101
Check PIF circuit

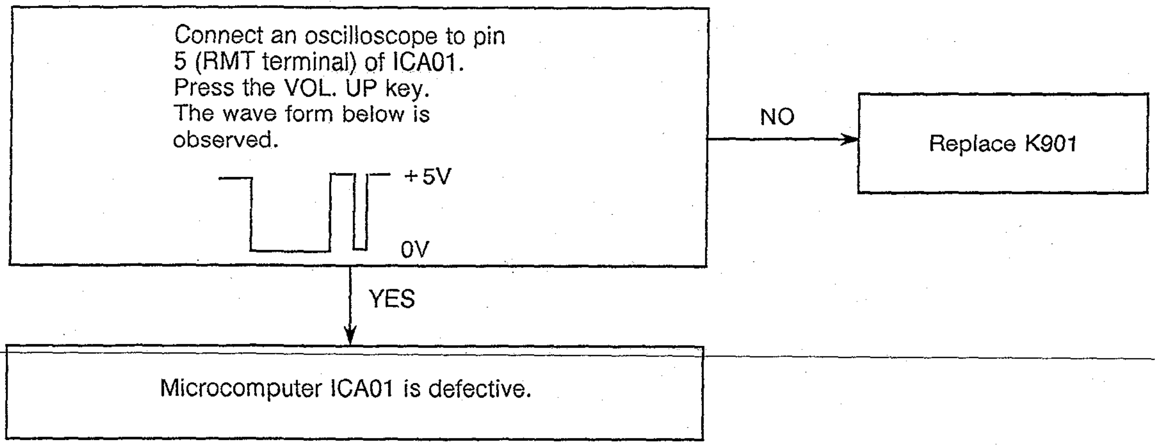
[CHART 2] Microcomputer (ICA01) Operation Check

NOTE: Before checking Microcomputer, check that control buttons and their connection work properly.

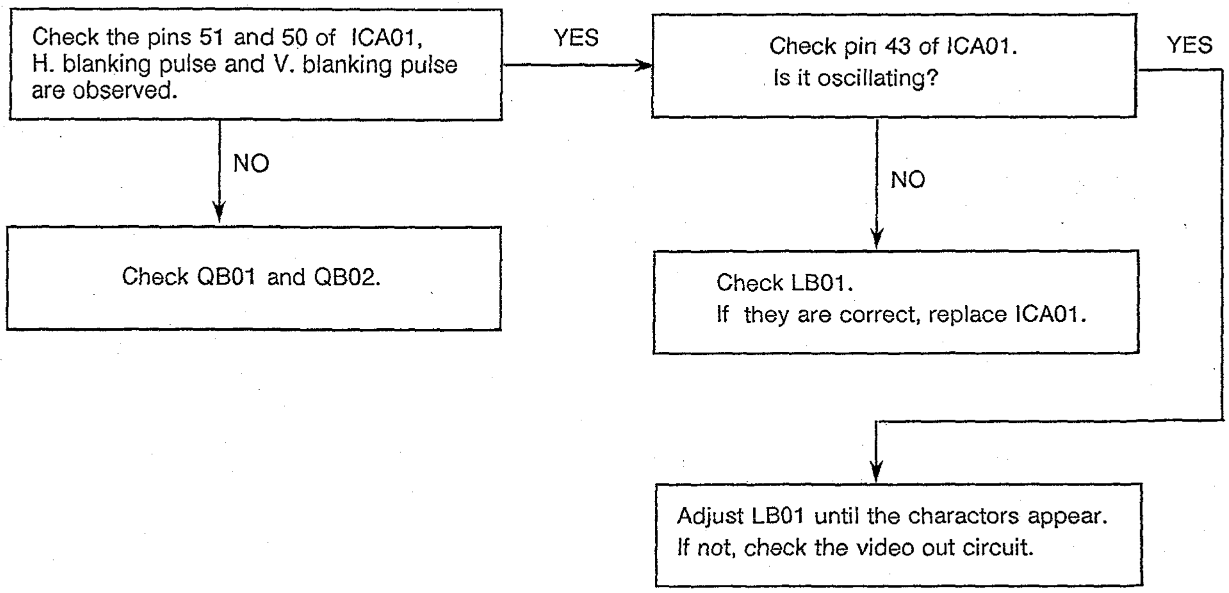

Check DC voltage at pin 52 of ICA01. +5V is observed.
YES
NO
Check +5V power circuit.
Check signal at pin 28 of ICA01. 2Vp-p or more is observed as 4 MHz clock frequency.
YES
NO
Microcomputer ICA01 is defective.
Check the voltage of RST at pin 27 of ICA01. +5V is observed.
YES
NO
Check the initializing circuit (Q806)
Connect pin 27 of ICA01 to GND and then release. ICA01 operates properly.
YES
NO
ICA01 is defective.
Troubles are in initializing circuit (Q806). After repairing it, check all function of ICA01.

[CHART 3] Remote Control Operation Check

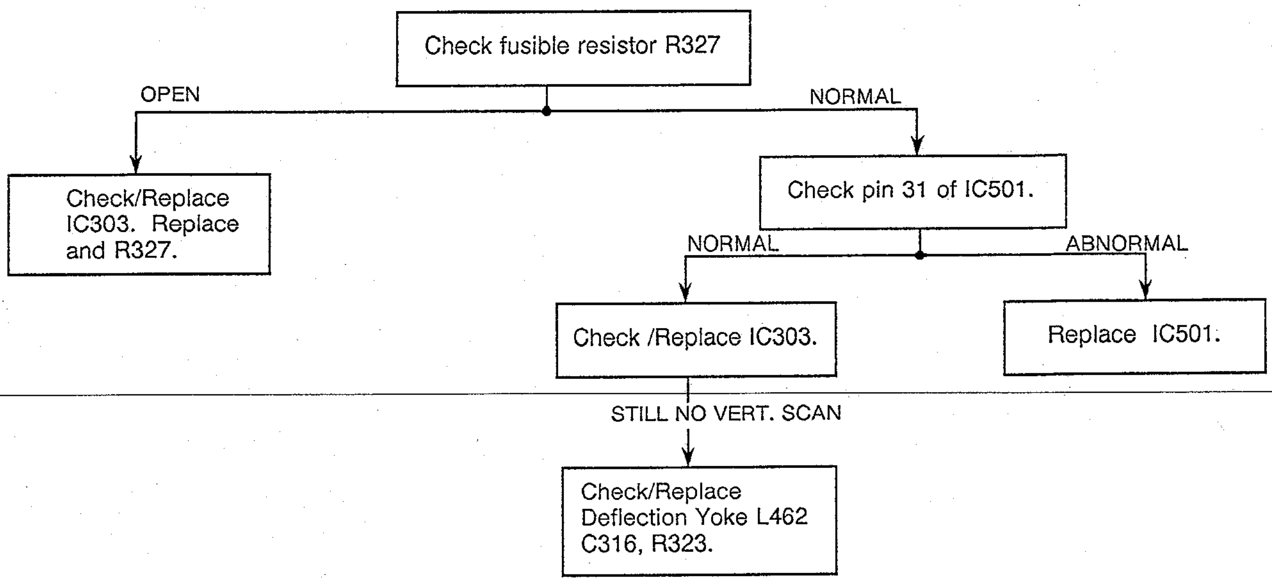
NOTE : Before checking RMT operation, check that key operation on TV set is proper.


Connect an oscilloscope to pin 5 (RMT terminal) of ICA01.
Press the VOL. UP key.
The wave form below is observed.
+5V
0V
NO
Replace K901
YES
Microcomputer ICA01 is defective.

[CHART 4] On Screen Display Operation Check


Check the pins 51 and 50 of ICA01, H. blanking pulse and V. blanking pulse are observed.
YES
Check pin 43 of ICA01. Is it oscillating?
YES
NO
Check QB01 and QB02.
NO
Check LB01. If they are correct, replace ICA01.
Adjust LB01 until the charactors appear. If not, check the video out circuit.

5. NO VERT. SCAN (ONE HORIZ. LINE RASTER)


Check fusible resistor R327
OPEN
NORMAL
Check/Replace IC303. Replace and R327.
Check pin 31 of IC501.
NORMAL
ABNORMAL
Check /Replace IC303.
Replace IC501.
STILL NO VERT. SCAN
Check/Replace Deflection Yoke L462 C316, R323.

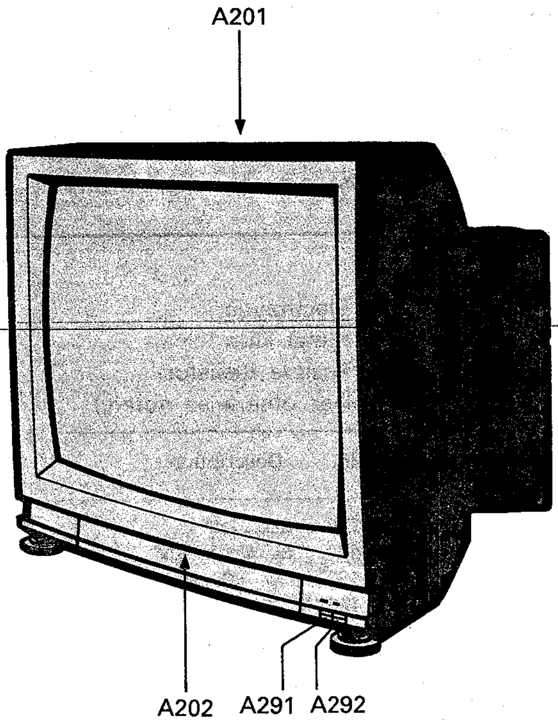
6. OUT OF VERT. SYNC. AND HORIZ. SYNC.

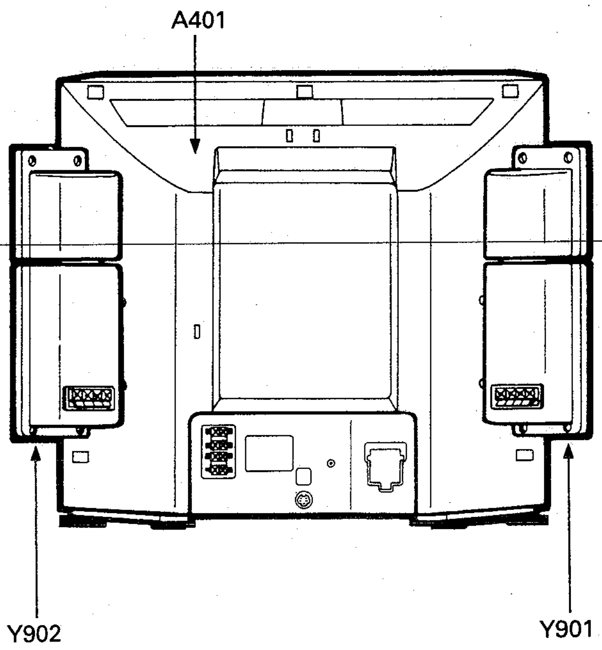
Check/Replace Sync Circuit pin 33 of IC501.

7. OUT OF HORIZ. SYNC.

Check/Replace Horiz. OSC Circuit and Horiz. AFC Circuit connected to Pins 36, 37 and 38 of IC501. Check/Replace IC501.

CABINET REPLACEMENT PARTS LIST





Location No.	Part No.	Description
A201	23418240	Front Cover
A202	23423091	Door
A203	23448132	Bottom Cover
A291	23443042	Knob, SURROUND
A292	23443041	Knob, POWER
A401	23423090	Back Cover
A606	23874364	Knob, MEMORY
A607	23443043	Knob, SUB
A701	23523241	Carton Box
A702	23934625	Packing
A966	23730844	Screw, SPEAKER
Y101	23994656	Owner's Guidebook
Y901	23415339	Speaker Box, Left
Y902	23415340	Speaker Box, Right
Y910	23918011	Case, Speaker Box, Left
Y920	23918012	Case, Speaker Box, Right

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" , "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

ABBREVIATIONS:

Capacitors........ CD :Ceramic Disk PF :Plastic Film EL :Electrolytic
Resistors........... CF :Carbon Film CC :Carbon Composition MF :Metal Film
OMF :Oxide Metal Film VR :Variable Resistor FR :Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C101	24707474	Tantalum, 0.47μF, ±20%, 35V
C102	24538473	PF, 0.047μF
C103	24232103	CD, 0.01μF, +80%, −20%
C104	24636229	EL, 2.2μF, 50V
C105	24232103	CD, 0.01μF, +80%, −20%
C106	24232103	CD, 0.01μF, +80%, −20%
C107	24794101	EL, 100μF, 16V
C108	24797220	EL, 22μF, 50V
C109	24212102	CD, 1000pF, ±10%
C110	24212102	CD, 1000pF, ±10%
C111	24212102	CD, 1000pF, ±10%
C112	24636478	EL, 0.47μF, 50V
C113	24538153	PF, 0.015μF
C114	24085988	EL, 1μF, ±20%, 50V, Non-Polar
C115	24212102	CD, 1000pF, ±10%
C116	24232103	CD, 0.01μF, +80%, −20%
C117	24232103	CD, 0.01μF, +80%, −20%
C118	24232103	CD, 0.01μF, +80%, −20%
C119	24212102	CD, 1000pF, ±10%
C120	24212102	CD, 1000pF, ±10%
C121	24212102	CD, 1000pF, ±10%
C122	24212102	CD, 1000pF, ±10%
C123	24232103	CD, 0.01μF, +80%, −20%
C124	24212102	CD, 1000pF, ±10%
C125	24212102	CD, 1000pF, ±10%
C126	24212102	CD, 1000pF, ±10%
C127	24212102	CD, 1000pF, ±10%
C128	24212102	CD, 1000pF, ±10%
C129	24212102	CD, 1000pF, ±10%
C130	24232103	CD, 0.01μF, +80%, −20%
C131	24797470	EL, 47μF, 50V
C132	24232103	CD, 0.01μF, +80%, −20%
C133	24232103	CD, 0.01μF, +80%, −20%
C134	24636229	EL, 2.2μF, 50V
C135	24436820	CD, 82pF
C136	24636478	EL, 0.47μF, 50V
C137	24232103	CD, 0.01μF, +80%, −20%
C138	24232103	CD, 0.01μF, +80%, −20%
C139	24353220	CD, 22pF
C140	24797470	EL, 47μF, 50V
C141	24232103	CD, 0.01μF, +80%, −20%
C142	24232103	CD, 0.01μF, +80%, −20%
C143	24353080	CD, 8pF, ±0.25pF
C144	24232103	CD, 0.01μF, +80%, −20%
C145	24085987	EL, 4.7μF, ±20%, 16V, Non-Polar
C146	24593222	PF, 2200pF
C148	24212152	CD, 1500pF, ±10%
C151	24094959	Variable Capacitor, 2 to 12pF, 50V
C160	24797101	EL, 100μF, 50V
C161	24232103	CD, 0.01μF, +80%, −20%
C162	24232103	CD, 0.01μF, +80%, −20%
C164	24232103	CD, 0.01μF, +80%, −20%
C201	24636100	EL, 10μF, 50V
C202	24797101	EL, 100μF, 50V
C203	24232103	CD, 0.01μF, +80%, −20%
C204	24797220	EL, 22μF, 50V
C205	24206478	EL, 0.47μF, 50V
C208	24212102	CD, 1000pF, ±10%
C209	24232103	CD, 0.01μF, +80%, −20%
C210	24636100	EL, 10μF, 50V
C211	24436471	CD, 470pF
C212	24436471	CD, 470pF
C213	24232103	CD, 0.01μF, +80%, −20%
C214	24538104	PF, 0.1μF
C215	24436151	CD, 150pF
C216	24797470	EL, 47μF, 50V
C217	24797470	EL, 47μF, 50V
C218	24797220	EL, 22μF, 50V
C219	24436270	CD, 27pF
C220	24794101	EL, 100μF, 16V
C260	24633100	EL, 10μF, 16V
C261	24633330	EL, 33μF, 16V
C262	24085988	EL, 1μF, ±20%, 50V, Non-Polar
C263	24212152	CD, 1500pF, ±10%
C301	24636229	EL, 2.2μF, 50V
C302	24212152	CD, 1500pF, ±10%

Location No.	Part No.	Description
C303	24617891	EL, 1μF, ±10%, 50V
C304	24212102	CD, 1000pF, ±10%
C306	24693563	PF, 0.056μF, 100V
C307	24232103	CD, 0.01μF, +80%, −20%
C311	24796222	EL, 2200μF, 35V
C314	24214271	CD, 270pF, ±10%, 500V
C316	24795472	EL, 4700μF, 25V
C317	24617912	EL, 2.2μF, ±10%, 50V
C318	24082049	PF, 0.047μF, 100V
C319	24693272	PF, 2700pF, 100V
C320	24214152	CD, 1500pF, ±10%, 500V
C323	24592273	PF, 0.027μF, ±10%
C325	24796221	EL, 220μF, 35V
C327	24693104	PF, 0.1μF, 100V
C330	24794471	EL, 470μF, 16V
~~C331~~	~~24095678~~	~~PF, 0.22μF, ±10%, 100V~~
C362	24593272	PF, 2700pF
C363	24538473	PF, 0.047μF
C364	24212471	CD, 470pF, ±10%
C365	24798470	EL, 47μF, 100V
C366	24593472	PF, 4700pF
C368	24538104	PF, 0.1μF
C373	24538474	PF, 0.47μF
C374	24538223	PF, 0.022μF
C401	24636010	EL, 1μF, 50V
C402	24353271	CD, 270pF
C403	24636339	EL, 3.3μF, 50V
C405	24593203	PF, 0.02μF
C406	24593203	PF, 0.02μF
C407	24593243	PF, 0.024μF
C408	24617929	EL, 18μF, ±20%, 50V
C409	24232103	CD, 0.01μF, +80%, −20%
C412	24593182	PF, 1800pF
C413	24593182	PF, 1800pF
C416	24214331	CD, 330pF, ±10%, 500V
C417	24214222	CD, 2200pF, ±10%, 500V
C418	24677100	EL, 10μF, ±20%, 160V
C420	24436331	CD, 330pF
⚠ C440	24095888	PF, 0.01μF, ±3%, 1600V
C441	24214221	CD, 220pF, ±10%, 500V
⚠ C443	24082018	PF, 1600pF, ±3%, 1600V
C444	24829393	PF, 0.039μF, 400V
C445	24828473	PF, 0.047μF, 200V
C446	24640962	EL, 33μF, ±20%, 200V
C447	24640968	EL, 10μF, 400V
C448	24754222	EL, 2200μF, 25V
⚠ C463	24212222	CD, 2200pF, ±10%
⚠ C464	24095908	PF, 3300pF, ±3%, 1600V
C466	24794471	EL, 470μF, 16V
C467	24095632	PF, 0.47μF, 200V
C468	24538474	PF, 0.47μF
C470	24082005	PF, 0.75μF, 200V
C471	24095759	PF, 0.39μF, 200V
C473	24640933	EL, 1μF, ±20%
C474	24095682	PF, 0.12μF, 200V
C501	24797220	EL, 22μF, 50V
C505	24593273	PF, 0.027μF
C506	24593273	PF, 0.027μF
C507	24593103	PF, 0.01μF
C508	24085028	EL, 2.2μF, 25V, Non-Polar
C509	24353330	CD, 33pF
C510	24232103	CD, 0.01μF, +80%, −20%
C511	24232103	CD, 0.01μF, +80%, −20%
C512	24353200	CD, 20pF

Location No.	Part No.	Description
C515	24636010	EL, 1μF, 50V
C516	24538104	PF, 0.1μF
C517	24538104	PF, 0.1μF
C518	24232103	CD, 0.01μF, +80%, −20%
C519	24232103	CD, 0.01μF, +80%, −20%
C520	24206478	EL, 0.47μF, 50V
C521	24538474	PF, 0.47μF
C522	24538474	PF, 0.47μF
C523	24538474	PF, 0.47μF
C524	24232103	CD, 0.01μF, +80%, −20%
C525	24436121	CD, 120pF
C526	24436121	CD, 120pF
C527	24436121	CD, 120pF
C530	24794470	EL, 47μF, 16V
C531	24206100	EL, 10μF, 50V
~~C532~~	~~24436101~~	~~CD, 100pF~~
C533	24436101	CD, 100pF
C534	24436101	CD, 100pF
C535	24206100	EL, 10μF, 50V
C536	24206478	EL, 0.47μF, 50V
C537	24203101	EL, 100μF, ±20%, 16V
C540	24436391	CD, 390pF
C541	24436391	CD, 390pF
C542	24436391	CD, 390pF
C544	24436101	CD, 100pF
C601	24636010	EL, 1μF, 50V
C615	24636479	EL, 4.7μF, 50V
C616	24636479	EL, 4.7μF, 50V
C617	24636479	EL, 4.7μF, 50V
C618	24636229	EL, 2.2μF, 50V
C619	24593222	PF, 2200pF
C620	24538563	PF, 0.056μF
C621	24232103	CD, 0.01μF, +80%, −20%
C622	24436471	CD, 470pF
C623	24436471	CD, 470pF
C624	24085031	EL, 1μF, ±20%, 25V, Non-Polar
C625	24797470	EL, 47μF, 50V
C626	24085031	EL, 1μF, ±20%, 25V, Non-Polar
C627	24232103	CD, 0.01μF, +80%, −20%
C628	24538563	PF, 0.056μF
C629	24593222	PF, 2200pF
C630	24636100	EL, 10μF, 50V
C631	24796220	EL, 22μF, 35V
C632	24636010	EL, 1μF, 50V
C633	24538184	PF, 0.18μF
C634	24538123	PF, 0.012μF
C635	24794101	EL, 100μF, 16V
C636	24636478	EL, 0.47μF, 50V
C637	24795221	EL, 220μF, 25V
C638	24636478	EL, 0.47μF, 50V
C639	24636010	EL, 1μF, 50V
C640	24538184	PF, 0.18μF
C641	24538123	PF, 0.012μF
C642	24794101	EL, 100μF, 16V
C643	24538104	PF, 0.1μF
C644	24797471	EL, 470μF, 50V
C645	24538104	PF, 0.1μF
C646	24795102	EL, 1000μF, 25V
C647	24795102	EL, 1000μF, 25V
C649	24795470	EL, 47μF, 25V
C670	24436470	CD, 47pF
C671	24436470	CD, 47pF

Location No.	Part No.	Description
C672	24232103	CD, 0.01μF, +80%, −20%
C673	24797470	EL, 47μF, 50V
C674	24232103	CD, 0.01μF, +80%, −20%
C675	24212471	CD, 470pF, ±10%
C676	24212471	CD, 470pF, ±10%
C677	24353680	CD, 68pF
C678	24232103	CD, 0.01μF, +80%, −20%
C691	24203100	EL, 10μF, ±20%, 16V
C693	24203100	EL, 10μF, ±20%, 16V
⚠ C801	24095951	PF, 0.1μF, ±20%, AC250V
C802	24094654	CD, 470pF, ±20%, AC400V
C803	24094654	CD, 470pF, ±20%, AC400V
C804	24094654	CD, 470pF, ±20%, AC400V
C805	24094654	CD, 470pF, ±20%, AC400V
C806	24095951	PF, 0.1μF, ±20%, AC250V
~~C811~~	~~24092281~~	~~CD, 4700pF, ±20%, AC250V~~
C812	24092281	CD, 4700pF, ±20%, AC250V
C813	24092281	CD, 4700pF, ±20%, AC250V
C814	24092281	CD, 4700pF, ±20%, AC250V
C818	24086873	EL, 330μF, ±20%, 400V
C820	24636100	EL, 10μF, 50V
C824	24797221	EL, 220μF, 50V
C825	24212102	CD, 1000pF, ±10%
C826	24538104	PF, 0.1μF
C827	24598561	PF, 560pF
C828	24636100	EL, 10μF, 50V
C829	24757470	EL, 47μF, 100V
C830	24095931	PF, 2200pF, 1600V
C831	24633100	EL, 10μF, 16V
C832	24442181	CD, 180pF, ±10%, 2kV
C833	24086945	EL, 330μF, ±20%, 200V
C834	24636479	EL, 4.7μF, 50V
C835	24214221	CD, 220pF, ±10%, 500V
C836	24795222	EL, 2200μF, 25V
C837	24436561	CD, 560pF
C838	24598561	PF, 560pF
C839	24538154	PF, 0.15μF
C840	24636100	EL, 10μF, 50V
C842	24794470	EL, 47μF, 16V
C843	24794470	EL, 47μF, 16V
C844	24214221	CD, 220pF, ±10%, 500V
C845	24797102	EL, 1000μF, 50V
C846	24214221	CD, 220pF, ±10%, 500V
C847	24797222	EL, 2200μF, 50V
C849	24214221	CD, 220pF, ±10%, 500V
C860	24797102	EL, 1000μF, 50V
C861	24442391	CD, 390pF, ±10%, 2kV
C862	24636479	EL, 4.7μF, 50V
C863	24095951	PF, 0.1μF, ±20%, AC250V
C864	24092030	CD, 680pF, ±10%, 2kV
C865	24214391	CD, 390pF, ±10%, 500V
C866	24214391	CD, 390pF, ±10%, 500V
C867	24538474	PF, 0.47μF
C869	24795221	EL, 220μF, 25V
C870	24636100	EL, 10μF, 50V
C871	24214391	CD, 390pF, ±10%, 500V
C872	24212101	CD, 100pF, ±10%
C873	24095951	PF, 0.1μF, ±20%, AC250V
C901	24640987	EL, 2.2μF, 350V
C902	24095981	PF, 2200pF, 1600V
CA01	24636478	EL, 0.47μF, 50V
CA02	24633100	EL, 10μF, 16V
CA03	24633100	EL, 10μF, 16V
CA04	24232103	CD, 0.01μF, +80%, −20%

Location No.	Part No.	Description
CA05	24212102	CD, 1000pF, ±10%
CA08	24636100	EL, 10μF, 50V
CA09	24353180	CD, 18pF
CA10	24636010	EL, 1μF, 50V
CA11	24436391	CD, 390pF
CA12	24436221	CD, 220pF
CA13	24636229	EL, 2.2μF, 50V
CA14	24232103	CD, 0.01μF, +80%, −20%
CA15	24538104	PF, 0.1μF
CA16	24538104	PF, 0.1μF
CA17	24538104	PF, 0.1μF
CA18	24206479	EL, 4.7μF, 50V
CA19	24206010	EL, 1μF, 50V
CA21	24206229	EL, 2.2μF, 50V
CA22	24794471	EL, 470μF, 16V
~~CA23~~	~~24212472~~	~~CD, 4700pF, ±10%~~
CA24	24232103	CD, 0.01μF, +80%, −20%
CA25	24206479	EL, 4.7μF, 50V
CA30	24636010	EL, 1μF, 50V
CA31	24212102	CD, 1000pF, ±10%
CA32	24436561	CD, 560pF
CA33	24212472	CD, 4700pF, ±10%
CA34	24212102	CD, 1000pF, ±10%
CA35	24436561	CD, 560pF
CA36	24212472	CD, 4700pF, ±10%
CA37	24636010	EL, 1μF, 50V
CA38	24232103	CD, 0.01μF, +80%, −20%
CA41	24212102	CD, 1000pF, ±10%
CA42	24436101	CD, 100pF
CB03	24436101	CD, 100pF
CB07	24538104	PF, 0.1μF
CG01	24538103	PF, 0.01μF
CG02	24538103	PF, 0.01μF
CG03	24797470	EL, 47μF, 50V
CG04	24797470	EL, 47μF, 50V
CG05	24538224	PF, 0.22μF
CG06	24538104	PF, 0.1μF
CG07	24538223	PF, 0.022μF
CG08	24538473	PF, 0.047μF
CG09	24794101	EL, 100μF, 16V
CG10	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CG11	24636100	EL, 10μF, 50V
CG12	24794101	EL, 100μF, 16V
CG13	24794101	EL, 100μF, 16V
CG14	24794101	EL, 100μF, 16V
CG15	24633100	EL, 10μF, 16V
CG16	24794101	EL, 100μF, 16V
CG18	24436151	CD, 150pF
CG19	24636100	EL, 10μF, 50V
CG20	24212102	CD, 1000pF, ±10%
CG21	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CG22	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CG23	24232103	CD, 0.01μF, +80%, −20%
CG24	24232103	CD, 0.01μF, +80%, −20%
CG25	24797220	EL, 22μF, 50V
CG26	24797220	EL, 22μF, 50V
CG27	24232103	CD, 0.01μF, +80%, −20%
CH01	24636010	EL, 1μF, 50V
CH02	24636010	EL, 1μF, 50V
CH03	24636010	EL, 1μF, 50V
CH07	24636100	EL, 10μF, 50V

Location No.	Part No.	Description
CH08	24636010	EL, 1µF, 50V
CH09	24636010	EL, 1µF, 50V
CH10	24636010	EL, 1µF, 50V
CH11	24636010	EL, 1µF, 50V
CH12	24636010	EL, 1µF, 50V
CH21	24636010	EL, 1µF, 50V
CH22	24636010	EL, 1µF, 50V
CK01	24232103	CD, 0.01µF, +80%, −20%
CK02	24232103	CD, 0.01µF, +80%, −20%
CK03	24232103	CD, 0.01µF, +80%, −20%
CK04	24636229	EL, 2.2µF, 50V
CK05	24232103	CD, 0.01µF, +80%, −20%
CK06	24232103	CD, 0.01µF, +80%, −20%
CK07	24794101	EL, 100µF, 16V
CK09	24636479	EL, 4.7µF, 50V
CK10	24794470	EL, 47µF, 16V
CK11	24232103	CD, 0.01µF, +80%, −20%
CK12	24232103	CD, 0.01µF, +80%, −20%
CK13	24636229	EL, 2.2µF, 50V
CK14	24436180	CD, 18pF
CK15	24636478	EL, 0.47µF, 50V
CK16	24797470	EL, 47µF, 50V
CK17	24232103	CD, 0.01µF, +80%, −20%
CK18	24232103	CD, 0.01µF, +80%, −20%
CK19	24212222	CD, 2200pF, ±10%
CK20	24353220	CD, 22pF
CK21	24212152	CD, 1500pF, ±10%
CK22	24636479	EL, 4.7µF, 50V
CK23	24232103	CD, 0.01µF, +80%, −20%
CK24	24085988	EL, 1µF, ±20%, 50V, Non-Polar
CK25	24538153	PF, 0.015µF
CK26	24636478	EL, 0.47µF, 50V
CK27	24212102	CD, 1000pF, ±10%
CK28	24232103	CD, 0.01µF, +80%, −20%
CK29	24436470	CD, 47pF
CK30	24212102	CD, 1000pF, ±10%
CK31	24212102	CD, 1000pF, ±10%
CK32	24212102	CD, 1000pF, ±10%
CK33	24212102	CD, 1000pF, ±10%
CK34	24232103	CD, 0.01µF, +80%, −20%
CK35	24232103	CD, 0.01µF, +80%, −20%
CK36	24232103	CD, 0.01µF, +80%, −20%
CK37	24797220	EL, 22µF, 50V
CK38	24212102	CD, 1000pF, ±10%
CK39	24797101	EL, 100µF, 50V
CK40	24232103	CD, 0.01µF, +80%, −20%
CK41	24538473	PF, 0.047µF
CK42	24707474	Tantalum, 0.47µF, ±20%, 35V
CK43	24636229	EL, 2.2µF, 50V
CK44	24232103	CD, 0.01µF, +80%, −20%
CK45	24232103	CD, 0.01µF, +80%, −20%
CK46	24232103	CD, 0.01µF, +80%, −20%
CK47	24636100	EL, 10µF, 50V
CK48	24636010	EL, 1µF, 50V
CK49	24538473	PF, 0.047µF
CK61	24598821	PF, 820pF
CK62	24232103	CD, 0.01µF, +80%, −20%
CK63	24797470	EL, 47µF, 50V
CK64	24212102	CD, 1000pF, ±10%
CK65	24212102	CD, 1000pF, ±10%
CK66	24212102	CD, 1000pF, ±10%
CK67	24232103	CD, 0.01µF, +80%, −20%

Location No.	Part No.	Description
CK68	24212102	CD, 1000pF, ±10%
CK69	24436470	CD, 47pF
CK70	24636229	EL, 2.2µF, 50V
CK71	24232103	CD, 0.01µF, +80%, −20%
CK72	24232103	CD, 0.01µF, +80%, −20%
CK73	24636229	EL, 2.2µF, 50V
CM01	24436201	CD, 200pF
CM02	24436201	CD, 200pF
CM05	24232103	CD, 0.01µF, +80%, −20%
CM06	24357270	CD, 27pF
CM07	24538563	PF, 0.056µF
CM08	24232103	CD, 0.01µF, +80%, −20%
CM09	24232103	CD, 0.01µF, +80%, −20%
CM10	24436270	CD, 27pF
CN10	24436101	CD, 100pF
CN11	24436330	CD, 33pF
CN15	24436220	CD, 22pF
CN16	24232103	CD, 0.01µF, +80%, −20%
CN17	24436100	CD, 10pF, ±0.25pF
CN18	24232103	CD, 0.01µF, +80%, −20%
CP01	24436681	CD, 680pF
CP02	24085032	EL, 3.3µF, ±20%, 16V, Non-Polar
CP04	24636100	EL, 10µF, 50V
CP05	24232103	CD, 0.01µF, +80%, −20%
CP09	24212102	CD, 1000pF, ±10%
CP10	24212102	CD, 1000pF, ±10%
CP11	24436681	CD, 680pF
CP14	24232103	CD, 0.01µF, +80%, −20%
CP18	24212102	CD, 1000pF, ±10%
CP19	24212102	CD, 1000pF, ±10%
CP20	24085032	EL, 3.3µF, ±20%, 16V, Non-Polar
CP21	24232103	CD, 0.01µF, +80%, −20%
CP22	24593132	PF, 1300pF
CP23	24593132	PF, 1300pF
CP24	24085988	EL, 1µF, ±20%, 50V, Non-Polar
CP26	24593132	PF, 1300pF
CP27	24593132	PF, 1300pF
CP28	24085988	EL, 1µF, ±20%, 50V, Non-Polar
CP30	24085988	EL, 1µF, ±20%, 50V, Non-Polar
CP32	24636100	EL, 10µF, 50V
CP35	24794471	EL, 470µF, 16V
CP36	24538104	PF, 0.1µF
CP37	24206478	EL, 0.47µF, 50V
CP38	24538104	PF, 0.1µF
CP39	24538104	PF, 0.1µF
CP40	24538104	PF, 0.1µF
CP41	24232103	CD, 0.01µF, +80%, −20%
CP42	24593102	PF, 1000pF
CP43	24538104	PF, 0.1µF
CP44	24593243	PF, 0.024µF
CP45	24436271	CD, 270pF
CP47	24636339	EL, 3.3µF, 50V
CP48	24636229	EL, 2.2µF, 50V
CP49	24212152	CD, 1500pF, ±10%
CP62	24353330	CD, 33pF
CP63	24353200	CD, 20pF
CP64	24538473	PF, 0.047µF
CP65	24085028	EL, 2.2µF, 25V, Non-Polar
CP66	24538103	PF, 0.01µF

Location No.	Part No.	Description
CP67	24232103	CD, 0.01μF, +80%, −20%
CP68	24538473	PF, 0.047μF
CP69	24538473	PF, 0.047μF
CP70	24436101	CD, 100pF
CP71	24436100	CD, 10pF, ±0.25pF
CP72	24232103	CD, 0.01μF, +80%, −20%
CP73	24232103	CD, 0.01μF, +80%, −20%
CP74	24232103	CD, 0.01μF, +80%, −20%
CP75	24357270	CD, 27pF
CP76	24636478	EL, 0.47μF, 50V
CP77	24232103	CD, 0.01μF, +80%, −20%
CP78	24232103	CD, 0.01μF, +80%, −20%
CP79	24232103	CD, 0.01μF, +80%, −20%
CP81	24633220	EL, 22μF, 16V
CP83	24436201	CD, 200pF
~~CP84~~	~~24436201~~	~~CD, 200pF~~
CP86	24436330	CD, 33pF
CP88	24232103	CD, 0.01μF, +80%, −20%
CP89	24436220	CD, 22pF
CP92	24436301	CD, 300pF
CP93	24593122	PF, 1200pF
CP94	24636100	EL, 10μF, 50V
CP95	24436181	CD, 180pF
CP96	24436330	CD, 33pF
CS01	24232103	CD, 0.01μF, +80%, −20%
CS02	24538153	PF, 0.015μF
CS03	24538153	PF, 0.015μF
CS05	24538683	PF, 0.068μF
CS06	24436101	CD, 100pF
CS07	24636100	EL, 10μF, 50V
CS08	24636010	EL, 1μF, 50V
CS09	24538183	PF, 0.018μF
CS10	24203100	EL, 10μF, ±20%, 16V
CS11	24636100	EL, 10μF, 50V
CS12	24794101	EL, 100μF, 16V
CS13	24636479	EL, 4.7μF, 50V
CS14	24636479	EL, 4.7μF, 50V
CS15	24232103	CD, 0.01μF, +80%, −20%
CS16	24636478	EL, 0.47μF, 50V
CS17	24636478	EL, 0.47μF, 50V
CS18	24636479	EL, 4.7μF, 50V
CS19	24794470	EL, 47μF, 16V
CS20	24636478	EL, 0.47μF, 50V
CS21	24636478	EL, 0.47μF, 50V
CS22	24794470	EL, 47μF, 16V
CS23	24795470	EL, 47μF, 25V
CS24	24538104	PF, 0.1μF
CS25	24795471	EL, 470μF, 25V
CS26	24795471	EL, 470μF, 25V
CS27	24795471	EL, 470μF, 25V
CS28	24538104	PF, 0.1μF
CS30	24636479	EL, 4.7μF, 50V
CS31	24636479	EL, 4.7μF, 50V
CS40	24794470	EL, 47μF, 16V
CS41	24633220	EL, 22μF, 16V
CS42	24763471	EL, 470μF, ±20%, 16V
CV01	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CV02	24085988	EL, 1μF, ±20%, 50V, Non-Polar
CV03	24636100	EL, 10μF, 50V
CV04	24636010	EL, 1μF, 50V
CV05	24636010	EL, 1μF, 50V
CV06	24636100	EL, 10μF, 50V

Location No.	Part No.	Description
CV07	24232103	CD, 0.01μF, +80%, −20%
CV08	24636010	EL, 1μF, 50V
CV09	24636010	EL, 1μF, 50V
CV10	24636100	EL, 10μF, 50V
CV11	24636010	EL, 1μF, 50V
CV12	24636010	EL, 1μF, 50V
CV13	24636100	EL, 10μF, 50V
CV14	24797101	EL, 100μF, 50V
CV15	24232103	CD, 0.01μF, +80%, −20%
CV16	24232103	CD, 0.01μF, +80%, −20%
CV17	24636010	EL, 1μF, 50V
CV18	24636100	EL, 10μF, 50V
CV21	24232103	CD, 0.01μF, +80%, −20%
CV22	24636100	EL, 10μF, 50V
CV23	24636100	EL, 10μF, 50V
~~CV24~~	~~24636100~~	~~EL, 10μF, 50V~~
CV25	24436101	CD, 100pF
CV26	24636010	EL, 1μF, 50V
CV27	24436100	CD, 10pF, ±0.25pF
CV28	24202221	EL, 220μF, ±20%, 10V
CV29	24202221	EL, 220μF, ±20%, 10V
CV30	24636010	EL, 1μF, 50V
CV31	24636010	EL, 1μF, 50V
CV32	24636010	EL, 1μF, 50V
CV33	24232103	CD, 0.01μF, +80%, −20%
CV34	24202221	EL, 220μF, ±20%, 10V
CV35	24202221	EL, 220μF, ±20%, 10V
CV36	24636100	EL, 10μF, 50V
CV40	24636100	EL, 10μF, 50V
CW01	24232103	CD, 0.01μF, +80%, −20%
CW02	24633100	EL, 10μF, 16V
CW04	24636100	EL, 10μF, 50V
CW05	24232103	CD, 0.01μF, +80%, −20%
CW06	24636010	EL, 1μF, 50V
CW07	24636100	EL, 10μF, 50V
CW08	24636100	EL, 10μF, 50V
CW10	24794470	EL, 47μF, 16V
CX02	24538104	PF, 0.1μF
CX03	24538104	PF, 0.1μF
CX04	24538104	PF, 0.1μF
CX60	24436271	CD, 270pF
CX61	24436271	CD, 270pF
CX62	24436271	CD, 270pF
CX63	24436271	CD, 270pF
CX64	24232103	CD, 0.01μF, +80%, −20%
CX65	24797470	EL, 47μF, 50V
CX66	24232103	CD, 0.01μF, +80%, −20%
CX67	24232103	CD, 0.01μF, +80%, −20%
CX68	24636010	EL, 1μF, 50V
CX69	24636010	EL, 1μF, 50V
CX70	24636010	EL, 1μF, 50V
CX71	24636010	EL, 1μF, 50V
CX72	24636010	EL, 1μF, 50V
CX73	24636100	EL, 10μF, 50V
CX74	24636010	EL, 1μF, 50V
CX75	24636100	EL, 10μF, 50V
CX76	24797220	EL, 22μF, 50V
CX77	24436680	CD, 68pF
CX78	24636100	EL, 10μF, 50V
CX80	24232103	CD, 0.01μF, +80%, −20%
CX81	24636100	EL, 10μF, 50V
CX82	24794470	EL, 47μF, 16V
CY01	24636479	EL, 4.7μF, 50V
CY02	24436101	CD, 100pF

Location No.	Part No.	Description
CY03	24436271	CD, 270pF
CY04	24436271	CD, 270pF
CY05	24636479	EL, 4.7µF, 50V
CY06	24436101	CD, 100pF
CY07	24436101	CD, 100pF
CY08	24436101	CD, 100pF
CY09	24436331	CD, 330pF
CY10	24436221	CD, 220pF
CY11	24436221	CD, 220pF
CY12	24232103	CD, 0.01µF, +80%, −20%
CY13	24797470	EL, 47µF, 50V
CY14	24085988	EL, 1µF, ±20%, 50V, Non-Polar
CY15	24636220	EL, 22µF, 50V
CY16	24636100	EL, 10µF, 50V
~~CY17~~	~~24636479~~	~~EL, 4.7µF, 50V~~
CY18	24212102	CD, 1000pF, ±10%
CY19	24636100	EL, 10µF, 50V
CY20	24797220	EL, 22µF, 50V
CZ31	24636100	EL, 10µF, 50V
CZ34	24353560	CD, 56pF
CZ35	24436301	CD, 300pF
CZ36	24232103	CD, 0.01µF, +80%, −20%
CZ37	24636100	EL, 10µF, 50V
CAPACITORS		
R101	24366102	CF, 1k ohm
R102	24366103	CF, 10k ohm
R103	24366104	CF, 100k ohm
R104	24366222	CF, 2200 ohm
R105	24366153	CF, 15k ohm
R106	24366332	CF, 3300 ohm
R107	24366124	CF, 120k ohm
R108	24366222	CF, 2200 ohm
R109	24366222	CF, 2200 ohm
R110	24366684	CF, 680k ohm
R111	24366513	CF, 51k ohm
R112	24366753	CF, 75k ohm
R113	24366242	CF, 2400 ohm
R114	24366183	CF, 18k ohm
R115	24366561	CF, 560 ohm
R116	24366271	CF, 270 ohm
R117	24366332	CF, 3300 ohm
R118	24366821	CF, 820 ohm
R119	24366103	CF, 10k ohm
R120	24366473	CF, 47k ohm
R121	24366152	CF, 1500 ohm
R122	24366103	CF, 10k ohm
R123	24366103	CF, 10k ohm
R124	24366682	CF, 6800 ohm
R125	24366562	CF, 5600 ohm
R126	24552101	OMF, 100 ohm, 1/2W
R128	24366680	CF, 68 ohm
R129	24366102	CF, 1k ohm
R130	24366390	CF, 39 ohm
R131	24366680	CF, 68 ohm
R132	24366682	CF, 6800 ohm
R133	24366562	CF, 5600 ohm
R134	24552101	OMF, 100 ohm, 1/2W
R135	24366562	CF, 5600 ohm
R136	24366562	CF, 5600 ohm
R137	24366152	CF, 1500 ohm
R138	24366102	CF, 1k ohm

Location No.	Part No.	Description
R139	24366390	CF, 39 ohm
R140	24366562	CF, 5600 ohm
R141	24366103	CF, 10k ohm
R142	24366473	CF, 47k ohm
R143	24366103	CF, 10k ohm
R144	24366473	CF, 47k ohm
R145	24366152	CF, 1500 ohm
R146	24366473	CF, 47k ohm
R147	24366103	CF, 10k ohm
R148	24552221	OMF, 220 ohm, 1/2W
R149	24366103	CF, 10k ohm
R151	24066927	VR, 5k ohm, 1/10W
R152	24066925	VR, 20k ohm, 1/10W
R153	24066920	VR, 1M ohm, 1/10W
R160	24366473	CF, 47k ohm
~~R161~~	~~24366102~~	~~CF, 1k ohm~~
R162	24366822	CF, 8200 ohm
R163	24366332	CF, 3300 ohm
R164	24366112	CF, 1100 ohm
R165	24366182	CF, 1800 ohm
R166	24366562	CF, 5600 ohm
R167	24366101	CF, 100 ohm
R168	24366222	CF, 2200 ohm
R169	24366471	CF, 470 ohm
R170	24366112	CF, 1100 ohm
R171	24366470	CF, 47 ohm
R172	24366472	CF, 4700 ohm
R173	24366271	CF, 270 ohm
R174	24366334	CF, 330k ohm
R175	24366101	CF, 100 ohm
R176	24366331	CF, 330 ohm
R177	24366154	CF, 150k ohm
R178	24366820	CF, 82 ohm
R179	24366223	CF, 22k ohm
R180	24366153	CF, 15k ohm
R181	24366131	CF, 130 ohm
R182	24366271	CF, 270 ohm
R183	24366271	CF, 270 ohm
R184	24366105	CF, 1M ohm
R185	24366473	CF, 47k ohm
R186	24366103	CF, 10k ohm
R187	24366152	CF, 1500 ohm
R188	24366472	CF, 4700 ohm
R189	24366472	CF, 4700 ohm
R190	24366103	CF, 10k ohm
R191	24366331	CF, 330 ohm
R192	24366101	CF, 100 ohm
R193	24552101	OMF, 100 ohm, 1/2W
R194	24366473	CF, 47k ohm
R195	24366103	CF, 10k ohm
R196	24366103	CF, 10k ohm
R197	24366473	CF, 47k ohm
R198	24366332	CF, 3300 ohm
R199	24366152	CF, 1500 ohm
R201	24366473	CF, 47k ohm
R204	24366102	CF, 1k ohm
R205	24366102	CF, 1k ohm
R206	24366471	CF, 470 ohm
R207	24366473	CF, 47k ohm
R208	24366101	CF, 100 ohm
R209	24366103	CF, 10k ohm
R210	24366203	CF, 20k ohm
R211	24366622	CF, 6200 ohm
R212	24366103	CF, 10k ohm

Location No.	Part No.	Description
R213	24366101	CF, 100 ohm
R214	24366222	CF, 2200 ohm
R215	24366222	CF, 2200 ohm
R216	24366133	CF, 13k ohm
R217	24366101	CF, 100 ohm
R218	24366222	CF, 2200 ohm
R219	24366472	CF, 4700 ohm
R220	24366103	CF, 10k ohm
R221	24366103	CF, 10k ohm
R223	24366103	CF, 10k ohm
R224	24366331	CF, 330 ohm
R226	24366222	CF, 2200 ohm
R227	24366102	CF, 1k ohm
R228	24366222	CF, 2200 ohm
R229	24366152	CF, 1500 ohm
R230	24366101	CF, 100 ohm
R240	24366153	CF, 15k ohm
R241	24366562	CF, 5600 ohm
R252	24061592	VR, 1k ohm, 1/8W
R253	24061592	VR, 1k ohm, 1/8W
R255	24066600	VR, 10k ohm, 1/10W
R256	24066926	VR, 10k ohm, 1/10W
R257	24066926	VR, 10k ohm, 1/10W
R260	24366103	CF, 10k ohm
R261	24366682	CF, 6800 ohm
R263	24366394	CF, 390k ohm
R265	24366332	CF, 3300 ohm
R266	24366102	CF, 1k ohm
R267	24366103	CF, 10k ohm
R268	24366104	CF, 100k ohm
R269	24366103	CF, 10k ohm
R270	24366102	CF, 1k ohm
R271	24366103	CF, 10k ohm
R272	24366332	CF, 3300 ohm
R273	24366223	CF, 22k ohm
R276	24366562	CF, 5600 ohm
R301	24366301	CF, 300 ohm
R302	24366244	CF, 240k ohm
R303	24366563	CF, 56k ohm
R304	24366102	CF, 1k ohm
R305	24366161	CF, 160 ohm
R306	24366203	CF, 20k ohm
R307	24366101	CF, 100 ohm
R308	24366561	CF, 560 ohm
R311	24552242	OMF, 2400 ohm, 1/2W
R312	24366153	CF, 15k ohm
R313	24366474	CF, 470k ohm
R318	24366102	CF, 1k ohm
R320	24366471	CF, 470 ohm
R322	24552472	OMF, 4700 ohm, 1/2W
R323	24323828	OMF, 0.82 ohm, 2W
R325	24366163	CF, 16k ohm
R327	24983629	MF, 6.2 ohm, 1W
R328	24552111	OMF, 110 ohm, 1/2W
R329	24366123	CF, 12k ohm
R330	24366103	CF, 10k ohm
R331	24553751	OMF, 750 ohm, 1W
R331	24366303	CF, 30k ohm
R332	24553122	OMF, 1200 ohm, 1W
R332	24366684	CF, 680k ohm
R333	24366433	CF, 43k ohm
R334	24553752	OMF, 7500 ohm, 1W
R335	24366823	CF, 82k ohm
R351	24066602	VR, 50k ohm, 1/10W

Location No.	Part No.	Description
R356	24061794	VR, 20k ohm, 1/8W
R358	24061797	VR, 2k ohm, 1/8W
R359	24061791	VR, 200k ohm, 1/8W
R361	24366333	CF, 33k ohm
R362	24366333	CF, 33k ohm
R363	24366123	CF, 12k ohm
R364	24366393	CF, 39k ohm
R367	24366183	CF, 18k ohm
R368	24366102	CF, 1k ohm
R370	24366123	CF, 12k ohm
R371	24366103	CF, 10k ohm
R372	24366333	CF, 33k ohm
R373	24366103	CF, 10k ohm
R374	24366472	CF, 4700 ohm
R375	24366273	CF, 27k ohm
R378	24366393	CF, 39k ohm
R380	24366104	CF, 100k ohm
R381	24366561	CF, 560 ohm
R382	24366103	CF, 10k ohm
R383	24941275	CC, 2.7M ohm, 1/4W
R384	24366104	CF, 100k ohm
R385	24366684	CF, 680k ohm
R386	24366105	CF, 1M ohm
R386	24366561	CF, 560 ohm
R387	24366102	CF, 1k ohm
R391	24366104	CF, 100k ohm
R392	24366472	CF, 4700 ohm
R393	24366104	CF, 100k ohm
R399	24366682	CF, 6800 ohm
R401	24366472	CF, 4700 ohm
R402	24366273	CF, 27k ohm
R403	24366302	CF, 3k ohm
R405	24366511	CF, 510 ohm
R406	24366471	CF, 470 ohm
R407	24366241	CF, 240 ohm
R408	24366562	CF, 5600 ohm
R409	24366103	CF, 10k ohm
R410	24552432	OMF, 4300 ohm, 1/2W
R411	24366301	CF, 300 ohm
R412	24366241	CF, 240 ohm
R417	24007631	Cement, 3600 ohm, 7W
R418	24553682	OMF, 6800 ohm, 1W
R420	24366104	CF, 100k ohm
R440	24366103	CF, 10k ohm
R441	24366103	CF, 10k ohm
R443	24322109	OMF, 1 ohm, 1W
R444	24994828	MF, 0.82 ohm, ±10%, 2W
R448	24559229	FR, 2.2 ohm, ±10%, 3W
R451	24066925	VR, 20k ohm, 1/10W
R452	24069547	VR, 5k ohm, 0.08W
R460	24552161	OMF, 160 ohm, 1/2W
R462	24384200	OMF, 20 ohm, 3W
R463	24553102	OMF, 1k ohm, 1W
R464	24366683	CF, 68k ohm
R465	24366433	CF, 43k ohm
R466	24366912	CF, 9100 ohm
R467	24366272	CF, 2700 ohm
R468	24366102	CF, 1k ohm
R470	24322479	OMF, 4.7 ohm, 1W
R471	24533151	FR, 150 ohm, 2W
R502	24366334	CF, 330k ohm
R503	24366202	CF, 2k ohm
R504	24366471	CF, 470 ohm
R505	24366822	CF, 8200 ohm

Location No.	Part No.	Description
R507	24366822	CF, 8200 ohm
R509	24366203	CF, 20k ohm
R510	24366101	CF, 100 ohm
R511	24366562	CF, 5600 ohm
R512	24366152	CF, 1500 ohm
R513	24366152	CF, 1500 ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R518	24945185	CC, 1.8M ohm, ±10%, 1/4W
R519	24366333	CF, 33k ohm
R521	24366102	CF, 1k ohm
R522	24360185	CF, 1.8M ohm, 1/8W
R523	24366562	CF, 5600 ohm
R531	24366221	CF, 220 ohm
~~R532~~	~~24366241~~	~~CF, 240 ohm~~
R533	24366561	CF, 560 ohm
R535	24366301	CF, 300 ohm
R537	24366561	CF, 560 ohm
R538	24366331	CF, 330 ohm
R539	24366561	CF, 560 ohm
R541	24366102	CF, 1k ohm
R542	24366331	CF, 330 ohm
R543	24366103	CF, 10k ohm
R544	24366101	CF, 100 ohm
R547	24366101	CF, 100 ohm
R548	24366101	CF, 100 ohm
R549	24366101	CF, 100 ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24061591	VR, 2k ohm, 1/8W
R558	24061591	VR, 2k ohm, 1/8W
R559	24061591	VR, 2k ohm, 1/8W
R565	24366560	CF, 56 ohm
R566	24366560	CF, 56 ohm
R567	24366560	CF, 56 ohm
R568	24366102	CF, 1k ohm
R591	24383153	OMF, 15k ohm, 2W
R592	24383153	OMF, 15k ohm, 2W
R593	24383153	OMF, 15k ohm, 2W
R598	24360394	CF, 390k ohm, 1/8W
R602	24366472	CF, 4700 ohm
R619	24366223	CF, 22k ohm
R623	24366102	CF, 1k ohm
R624	24366154	CF, 150k ohm
R625	24366154	CF, 150k ohm
R628	24366472	CF, 4700 ohm
R629	24366184	CF, 180k ohm
R630	24366472	CF, 4700 ohm
R631	24366123	CF, 12k ohm
R632	24366562	CF, 5600 ohm
R633	24366562	CF, 5600 ohm
R634	24366123	CF, 12k ohm
R635	24366472	CF, 4700 ohm
R636	24366103	CF, 10k ohm
R637	24366103	CF, 10k ohm
R638	24366472	CF, 4700 ohm
R639	24366272	CF, 2700 ohm
R640	24366332	CF, 3300 ohm
R641	24366472	CF, 4700 ohm
R642	24366272	CF, 2700 ohm
R643	24366332	CF, 3300 ohm
R644	24366229	CF, 2.2 ohm
R645	24366229	CF, 2.2 ohm
R646	24366223	CF, 22k ohm

Location No.	Part No.	Description
R647	24366473	CF, 47k ohm
R665	24381331	OMF, 330 ohm, 1/2W
R666	24381331	OMF, 330 ohm, 1/2W
R667	24366153	CF, 15k ohm
R668	24366153	CF, 15k ohm
R669	24366474	CF, 470k ohm
R670	24366102	CF, 1k ohm
R671	24366563	CF, 56k ohm
R672	24366563	CF, 56k ohm
R673	24366102	CF, 1k ohm
R674	24366221	CF, 220 ohm
R675	24366102	CF, 1k ohm
R676	24366102	CF, 1k ohm
R677	24366152	CF, 1500 ohm
R678	24552431	OMF, 430 ohm, 1/2W
~~R679~~	~~24366105~~	~~CF, 1M ohm~~
R680	24366223	CF, 22k ohm
R681	24366821	CF, 820 ohm
R682	24366222	CF, 2200 ohm
R690	24366222	CF, 2200 ohm
R691	24366222	CF, 2200 ohm
R692	24366471	CF, 470 ohm
R693	24366103	CF, 10k ohm
R694	24366103	CF, 10k ohm
R695	24366471	CF, 470 ohm
R696	24366473	CF, 47k ohm
R697	24366473	CF, 47k ohm
R698	24366222	CF, 2200 ohm
R801	24942565	CC, 5.6M ohm, 1/2W
R805	24007864	Cement, 3 ohm, 15W
R810	24384823	OMF, 82k ohm, 3W
R812	24321689	OMF, 6.8 ohm, 1/2W
R813	24553471	OMF, 470 ohm, 1W
R814	24321338	OMF, 0.33 ohm, 1/2W
R815	24366683	CF, 68k ohm
R816	24367123	CF, 12k ohm, ±2%
R817	24007952	Cement, 6.8 ohm, 5W
R818	24366331	CF, 330 ohm
R819	24327104	MF, 100k ohm, ±1%, 1/4W
R820	24366100	CF, 10 ohm
R821	24366101	CF, 100 ohm
R822	24322398	OMF, 0.39 ohm, 1W
R823	24007738	Cement, 330 ohm, 10W
R824	24322398	OMF, 0.39 ohm, 1W
R825	24366101	CF, 100 ohm
R826	24366331	CF, 330 ohm
R827	24007589	Cement, 1200 ohm, 5W
R828	24366103	CF, 10k ohm
R829	24383103	OMF, 10k ohm, 2W
R830	24552391	OMF, 390 ohm, 1/2W
R831	24366102	CF, 1k ohm
R832	24321338	OMF, 0.33 ohm, 1/2W
R833	24327134	MF, 130k ohm, ±1%, 1/4W
R834	24327222	MF, 2200 ohm, ±1%, 1/4W
R835	24366823	CF, 82k ohm
R836	24327913	MF, 91k ohm, ±1%, 1/4W
R837	24381100	OMF, 10 ohm, 1/2W
R838	24366103	CF, 10k ohm
R840	24366103	CF, 10k ohm
R841	24381472	OMF, 4700 ohm, 1/2W
R842	24557109	FR, 1 ohm, ±10%, 1W
R843	24366332	CF, 3300 ohm
R844	24366103	CF, 10k ohm
R845	24366332	CF, 3300 ohm

Location No.	Part No.	Description
R846	24366151	CF, 150 ohm
R847	24366102	CF, 1k ohm
R848	24366102	CF, 1k ohm
R849	24383153	OMF, 15k ohm, 2W
R851	24066924	VR, 50k ohm, 1/10W
R852	24066925	VR, 20k ohm, 1/10W
R860	24366182	CF, 1800 ohm
R861	24322228	OMF, 0.22 ohm, 1W
R862	24557109	FR, 1 ohm, ±10%, 1W
R863	24383152	OMF, 1500 ohm, 2W
R864	24383102	OMF, 1k ohm, 2W
R865	24366222	CF, 2200 ohm
R866	24366101	CF, 100 ohm
R867	24366392	CF, 3900 ohm
R868	24366103	CF, 10k ohm
R869	24366102	CF, 1k ohm
R870	24366102	CF, 1k ohm
R871	24366222	CF, 2200 ohm
R872	24366103	CF, 10k ohm
R880	24366102	CF, 1k ohm
⚠ R890	24000875	PTC Thermistor, 18 ohm, ±20%, 290V
R901	24946272	CC, 2700 ohm, ±10%, 1/2W
R902	24946272	CC, 2700 ohm, ±10%, 1/2W
R903	24946272	CC, 2700 ohm, ±10%, 1/2W
R920	24000874	FR, 4.3 ohm, 1W
RA02	24366472	CF, 4700 ohm
RA03	24366472	CF, 4700 ohm
RA06	24366473	CF, 47k ohm
RA09	24366223	CF, 22k ohm
RA10	24366123	CF, 12k ohm
RA11	24366102	CF, 1k ohm
RA12	24366102	CF, 1k ohm
RA13	24366472	CF, 4700 ohm
RA14	24366471	CF, 470 ohm
RA15	24366471	CF, 470 ohm
RA16	24366471	CF, 470 ohm
RA17	24366102	CF, 1k ohm
RA18	24366102	CF, 1k ohm
RA19	24366102	CF, 1k ohm
RA20	24366103	CF, 10k ohm
RA21	24366103	CF, 10k ohm
RA22	24366102	CF, 1k ohm
RA23	24366102	CF, 1k ohm
RA24	24366102	CF, 1k ohm
RA25	24366102	CF, 1k ohm
RA26	24366102	CF, 1k ohm
RA27	24366102	CF, 1k ohm
RA28	24366102	CF, 1k ohm
RA29(U902)	24366102	CF, 1k ohm
RA29(U904)	24366122	CF, 1200 ohm
RA30(U902)	24366102	CF, 1k ohm
RA30(U904)	24366122	CF, 1200 ohm
RA31	24366102	CF, 1k ohm
RA32	24366473	CF, 47k ohm
RA33	24366473	CF, 47k ohm
RA34	24366152	CF, 1500 ohm
RA35	24366103	CF, 10k ohm
RA36	24366392	CF, 3900 ohm
RA37	24366103	CF, 10k ohm
RA38	24366102	CF, 1k ohm
RA39	24366102	CF, 1k ohm
RA40	24366102	CF, 1k ohm
RA41	24366103	CF, 10k ohm

Location No.	Part No.	Description
RA42	24366102	CF, 1k ohm
RA43	24366102	CF, 1k ohm
RA44	24366472	CF, 4700 ohm
RA45	24366102	CF, 1k ohm
RA46	24366102	CF, 1k ohm
RA47	24366102	CF, 1k ohm
RA48	24366102	CF, 1k ohm
RA49	24366102	CF, 1k ohm
RA50	24366102	CF, 1k ohm
RA51	24366102	CF, 1k ohm
RA52	24366102	CF, 1k ohm
RA53	24366102	CF, 1k ohm
RA54	24366223	CF, 22k ohm
RA55	24366333	CF, 33k ohm
RA56	24366333	CF, 33k ohm
RA57	24366333	CF, 33k ohm
RA58	24366221	CF, 220 ohm
RA60	24366333	CF, 33k ohm
RA61	24366392	CF, 3900 ohm
RA62	24366333	CF, 33k ohm
RA63	24366563	CF, 56k ohm
RA64	24366105	CF, 1M ohm
RA65	24366103	CF, 10k ohm
RA66	24366103	CF, 10k ohm
RA67	24366102	CF, 1k ohm
RA68	24366102	CF, 1k ohm
RA69	24366102	CF, 1k ohm
RA70	24366102	CF, 1k ohm
RA71	24366102	CF, 1k ohm
RA72	24366102	CF, 1k ohm
RA73	24366561	CF, 560 ohm
RA74	24366102	CF, 1k ohm
RA75	24366102	CF, 1k ohm
RA76	24366564	CF, 560k ohm
RA77	24366102	CF, 1k ohm
RA78	24366102	CF, 1k ohm
RA79	24366563	CF, 56k ohm
RA81	24366102	CF, 1k ohm
RA83	24366431	CF, 430 ohm
RA84	24366102	CF, 1k ohm
RA85	24366123	CF, 12k ohm
RA86	24366561	CF, 560 ohm
RA87	24366564	CF, 560k ohm
RA88	24366152	CF, 1500 ohm
RA89	24366563	CF, 56k ohm
RA90	24366103	CF, 10k ohm
RA91	24366392	CF, 3900 ohm
RA92	24366103	CF, 10k ohm
RA93	24366473	CF, 47k ohm
RA94	24366152	CF, 1500 ohm
RA95	24366103	CF, 10k ohm
RA96	24366102	CF, 1k ohm
RA97	24366102	CF, 1k ohm
RA98	24366223	CF, 22k ohm
RA99	24366103	CF, 10k ohm
RB01	24366103	CF, 10k ohm
RB02	24366332	CF, 3300 ohm
RB04	24366103	CF, 10k ohm
RB05	24366332	CF, 3300 ohm
RB06	24366473	CF, 47k ohm
RB07	24366102	CF, 1k ohm
RB08	24366102	CF, 1k ohm
RB09	24366103	CF, 10k ohm
RB15	24366153	CF, 15k ohm

Location No.	Part No.	Description
RB17	24366102	CF, 1k ohm
RB18	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB19	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB20	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB21	24945565	CC, 5.6M ohm, ±10%, 1/4W
RB25	24366103	CF, 10k ohm
RB30	24366103	CF, 10k ohm
RB31	24366103	CF, 10k ohm
RG01	24366103	CF, 10k ohm
RG02	24366104	CF, 100k ohm
RG03	24366104	CF, 100k ohm
RG04	24366103	CF, 10k ohm
RG05	24366223	CF, 22k ohm
RG06	24366103	CF, 10k ohm
RG07	24366103	CF, 10k ohm
RG08	24366272	CF, 2700 ohm
RG09	24366224	CF, 220k ohm
RG10	24366473	CF, 47k ohm
RG11	24366562	CF, 5600 ohm
RG12	24366473	CF, 47k ohm
RG13	24366221	CF, 220 ohm
RG14	24366101	CF, 100 ohm
RG15	24366102	CF, 1k ohm
RG16	24366104	CF, 100k ohm
RG17	24366104	CF, 100k ohm
RG18	24366101	CF, 100 ohm
RG19	24366822	CF, 8200 ohm
RG20	24366103	CF, 10k ohm
RG21	24366332	CF, 3300 ohm
RG22	24366303	CF, 30k ohm
RG23	24366332	CF, 3300 ohm
RG24	24366103	CF, 10k ohm
RG25	24366103	CF, 10k ohm
RG26	24366103	CF, 10k ohm
RG27	24366103	CF, 10k ohm
RG28	24366103	CF, 10k ohm
RG31	24366473	CF, 47k ohm
RG32	24366473	CF, 47k ohm
RG34	24366473	CF, 47k ohm
RG35	24366102	CF, 1k ohm
RG50	24061795	VR, 10k ohm, 1/8W
RH01	24366152	CF, 1500 ohm
RH02	24366122	CF, 1200 ohm
RH03	24366152	CF, 1500 ohm
RH04	24366511	CF, 510 ohm
RH05	24366621	CF, 620 ohm
RH06	24366152	CF, 1500 ohm
RH16	24366472	CF, 4700 ohm
RH18	24366102	CF, 1k ohm
RH19	24366103	CF, 10k ohm
RH23	24366103	CF, 10k ohm
RH24	24366222	CF, 2200 ohm
RH25	24366101	CF, 100 ohm
RH26	24366101	CF, 100 ohm
RH27	24366101	CF, 100 ohm
RH29	24366332	CF, 3300 ohm
RH30	24366222	CF, 2200 ohm
RH32	24366223	CF, 22k ohm
RH34	24366272	CF, 2700 ohm
RH38	24366272	CF, 2700 ohm
RH39	24366272	CF, 2700 ohm
RH40	24366272	CF, 2700 ohm
RH64	24366222	CF, 2200 ohm
RH65	24366473	CF, 47k ohm

Location No.	Part No.	Description
RH72	24366103	CF, 10k ohm
RH73	24366103	CF, 10k ohm
RH74	24366102	CF, 1k ohm
RH75	24366102	CF, 1k ohm
RH76	24366102	CF, 1k ohm
RH77	24366103	CF, 10k ohm
RH78	24366102	CF, 1k ohm
RH79	24366472	CF, 4700 ohm
RH80	24366103	CF, 10k ohm
RH81	24366272	CF, 2700 ohm
RH90	24366103	CF, 10k ohm
RH91	24366103	CF, 10k ohm
RH92	24366332	CF, 3300 ohm
RH95	24366103	CF, 10k ohm
RH96	24366101	CF, 100 ohm
RH97	24366682	CF, 6800 ohm
RK01	24366221	CF, 220 ohm
RK03	24366131	CF, 130 ohm
RK04	24366221	CF, 220 ohm
RK05	24366103	CF, 10k ohm
RK06	24366103	CF, 10k ohm
RK07	24366103	CF, 10k ohm
RK08	24552221	OMF, 220 ohm, 1/2W
RK09	24366103	CF, 10k ohm
RK10	24366473	CF, 47k ohm
RK11	24366102	CF, 1k ohm
RK12	24366822	CF, 8200 ohm
RK13	24366562	CF, 5600 ohm
RK14	24366821	CF, 820 ohm
RK15	24366112	CF, 1100 ohm
RK16	24366332	CF, 3300 ohm
RK17	24366101	CF, 100 ohm
RK18	24366222	CF, 2200 ohm
RK19	24366471	CF, 470 ohm
RK20	24366112	CF, 1100 ohm
RK21	24366470	CF, 47 ohm
RK22	24366472	CF, 4700 ohm
RK23	24366334	CF, 330k ohm
RK24	24366101	CF, 100 ohm
RK25	24366331	CF, 330 ohm
RK26	24366154	CF, 150k ohm
RK27	24366334	CF, 330k ohm
RK28	24366820	CF, 82 ohm
RK29	24366271	CF, 270 ohm
RK30	24366102	CF, 1k ohm
RK31	24366223	CF, 22k ohm
RK32	24366104	CF, 100k ohm
RK33	24366332	CF, 3300 ohm
RK34	24366153	CF, 15k ohm
RK35	24366222	CF, 2200 ohm
RK36	24366124	CF, 120k ohm
RK37	24366684	CF, 680k ohm
RK38	24366513	CF, 51k ohm
RK39	24366753	CF, 75k ohm
RK40	24366222	CF, 2200 ohm
RK42	24366471	CF, 470 ohm
RK43	24552101	OMF, 100 ohm, 1/2W
RK44	24366562	CF, 5600 ohm
RK45	24366390	CF, 39 ohm
RK46	24366102	CF, 1k ohm
RK47	24366680	CF, 68 ohm
RK50	24066927	VR, 5k ohm, 1/10W
RK51	24066925	VR, 20k ohm, 1/10W
RK52	24060618	VR, 100k ohm, 0.3W

Location No.	Part No.	Description
RK61	24366332	CF, 3300 ohm
RK62	24366223	CF, 22k ohm
RK63	24366682	CF, 6800 ohm
RK64	24366271	CF, 270 ohm
RK65	24366331	CF, 330 ohm
RK66	24366331	CF, 330 ohm
RK67	24366101	CF, 100 ohm
RK68	24552101	OMF, 100 ohm, 1/2W
RK69	24366105	CF, 1M ohm
RK70	24366473	CF, 47k ohm
RK71	24366103	CF, 10k ohm
RK72	24366103	CF, 10k ohm
RK73	24366103	CF, 10k ohm
RK74	24366102	CF, 1k ohm
RK76	24366102	CF, 1k ohm
RK77	24366102	CF, 1k ohm
RK78	24366101	CF, 100 ohm
RK79	24366681	CF, 680 ohm
RK80	24366562	CF, 5600 ohm
RK81	24366101	CF, 100 ohm
RK82	24366102	CF, 1k ohm
RK83	24366222	CF, 2200 ohm
RK84	24366473	CF, 47k ohm
RK86	24366152	CF, 1500 ohm
RK87	24366152	CF, 1500 ohm
RK89	24366562	CF, 5600 ohm
RM03	24366182	CF, 1800 ohm
RM04	24366242	CF, 2400 ohm
RM05	24366471	CF, 470 ohm
RM06	24945185	CC, 1.8M ohm, ±10%, 1/4W
RM16	24366333	CF, 33k ohm
RM20	24360221	CF, 220 ohm, 1/8W
RN12	24366272	CF, 2700 ohm
RN13	24366103	CF, 10k ohm
RN14	24366103	CF, 10k ohm
RN15	24366223	CF, 22k ohm
RN16	24366103	CF, 10k ohm
RN17	24366471	CF, 470 ohm
RN19	24366222	CF, 2200 ohm
RN21	24366332	CF, 3300 ohm
RN24	24366103	CF, 10k ohm
RN25	24366304	CF, 300k ohm
RN28	24366514	CF, 510k ohm
RN31	24366103	CF, 10k ohm
RN32	24366103	CF, 10k ohm
RN33	24366473	CF, 47k ohm
RN34	24366103	CF, 10k ohm
RN35	24366223	CF, 22k ohm
RP01	24366104	CF, 100k ohm
RP02	24366154	CF, 150k ohm
RP03	24366471	CF, 470 ohm
RP07	24366103	CF, 10k ohm
RP08	24366103	CF, 10k ohm
RP09	24366103	CF, 10k ohm
RP10	24366104	CF, 100k ohm
RP14	24366103	CF, 10k ohm
RP15	24366103	CF, 10k ohm
RP16	24366103	CF, 10k ohm
RP17	24366471	CF, 470 ohm
RP18	24366154	CF, 150k ohm
RP19	24366621	CF, 620 ohm
RP20	24366102	CF, 1k ohm
RP24	24366332	CF, 3300 ohm
RP25	24366621	CF, 620 ohm

Location No.	Part No.	Description
RP26	24366332	CF, 3300 ohm
RP27	24366102	CF, 1k ohm
RP28	24366101	CF, 100 ohm
RP29	24366332	CF, 3300 ohm
RP30	24366561	CF, 560 ohm
RP31	24366681	CF, 680 ohm
RP32	24366102	CF, 1k ohm
RP33	24366822	CF, 8200 ohm
RP34	24366331	CF, 330 ohm
RP35	24552221	OMF, 220 ohm, 1/2W
RP36	24366511	CF, 510 ohm
RP37	24366302	CF, 3k ohm
RP38	24366273	CF, 27k ohm
RP39	24366153	CF, 15k ohm
RP40	24366822	CF, 8200 ohm
RP41	24366272	CF, 2700 ohm
RP42	24366103	CF, 10k ohm
RP43	24366244	CF, 240k ohm
RP44	24366301	CF, 300 ohm
RP45	24366161	CF, 160 ohm
RP46	24366562	CF, 5600 ohm
RP47	24366102	CF, 1k ohm
RP48	24945185	CC, 1.8M ohm, ±10%, 1/4W
RP49	24366152	CF, 1500 ohm
RP50	24063750	VR, 10k ohm, 0.08W
RP51	24063750	VR, 10k ohm, 0.08W
RP52	24063750	VR, 10k ohm, 0.08W
RP53	24063750	VR, 10k ohm, 0.08W
RP54	24066955	VR, 1k ohm, 1/10W
RP59	24360221	CF, 220 ohm, 1/8W
RP60	24366152	CF, 1500 ohm
RP61	24945125	CC, 1.2M ohm, ±10%, 1/4W
RP62	24945185	CC, 1.8M ohm, ±10%, 1/4W
RP64	24366103	CF, 10k ohm
RP65	24366471	CF, 470 ohm
RP66	24366333	CF, 33k ohm
RP67	24366334	CF, 330k ohm
RP68	24366202	CF, 2k ohm
RP69	24366391	CF, 390 ohm
RP70	24366103	CF, 10k ohm
RP71	24366242	CF, 2400 ohm
RP72	24366101	CF, 100 ohm
RP73	24366182	CF, 1800 ohm
RP74	24366822	CF, 8200 ohm
RP75	24366331	CF, 330 ohm
RP76	24366471	CF, 470 ohm
RP78	24366222	CF, 2200 ohm
RP80	24366332	CF, 3300 ohm
RP81	24366103	CF, 10k ohm
RP85	24366103	CF, 10k ohm
RP86	24366272	CF, 2700 ohm
RP87	24366103	CF, 10k ohm
RP88	24366103	CF, 10k ohm
RP89	24366223	CF, 22k ohm
RP90	24366103	CF, 10k ohm
RP91	24366473	CF, 47k ohm
RP92	24366473	CF, 47k ohm
RP93	24366103	CF, 10k ohm
RP94	24366103	CF, 10k ohm
RP95	24366103	CF, 10k ohm
RP96	24366332	CF, 3300 ohm
RP97	24366224	CF, 220k ohm
RP98	24366223	CF, 22k ohm
RP99	24366101	CF, 100 ohm

Location No.	Part No.	Description
RS04	24366103	CF, 10k ohm
RS05	24366103	CF, 10k ohm
RS07	24366103	CF, 10k ohm
RS08	24366223	CF, 22k ohm
RS09	24366223	CF, 22k ohm
RS10	24366223	CF, 22k ohm
RS11	24366103	CF, 10k ohm
RS12	24366103	CF, 10k ohm
RS13	24366103	CF, 10k ohm
RS14	24366472	CF, 4700 ohm
RS15	24366103	CF, 10k ohm
RS16	24366103	CF, 10k ohm
RS17	24366221	CF, 220 ohm
RS18	24366102	CF, 1k ohm
RS19	24366563	CF, 56k ohm
RS20	24366223	CF, 22k ohm
RS21	24366104	CF, 100k ohm
RS22	24366103	CF, 10k ohm
RS23	24366332	CF, 3300 ohm
RS24	24366221	CF, 220 ohm
RS25	24552101	OMF, 100 ohm, 1/2W
RS26	24366333	CF, 33k ohm
RS27	24366273	CF, 27k ohm
RS28	24366103	CF, 10k ohm
RS29	24366222	CF, 2200 ohm
RS30	24366222	CF, 2200 ohm
RS31	24366222	CF, 2200 ohm
RS32	24366333	CF, 33k ohm
RS33	24366473	CF, 47k ohm
RS36	24366473	CF, 47k ohm
RS37	24366153	CF, 15k ohm
RS38	24366123	CF, 12k ohm
RS39	24366153	CF, 15k ohm
RS40	24366123	CF, 12k ohm
RS41	24366229	CF, 2.2 ohm
RS42	24366229	CF, 2.2 ohm
RS43	24366472	CF, 4700 ohm
RS44	24366224	CF, 220k ohm
RS45	24366103	CF, 10k ohm
RS46	24366123	CF, 12k ohm
RS47	24366103	CF, 10k ohm
RS48	24366152	CF, 1500 ohm
RS60	24366393	CF, 39k ohm
RS61	24366393	CF, 39k ohm
RS63	24366473	CF, 47k ohm
RS70	24366103	CF, 10k ohm
RV01	24366102	CF, 1k ohm
RV02	24366821	CF, 820 ohm
RV03	24366101	CF, 100 ohm
RV04	24366821	CF, 820 ohm
RV05	24366102	CF, 1k ohm
RV06	24366101	CF, 100 ohm
RV07	24366101	CF, 100 ohm
RV08	24366101	CF, 100 ohm
RV09	24366103	CF, 10k ohm
RV10	24366101	CF, 100 ohm
RV11	24366101	CF, 100 ohm
RV12	24366101	CF, 100 ohm
RV13	24366223	CF, 22k ohm
RV14	24366223	CF, 22k ohm
RV15	24366101	CF, 100 ohm
RV16	24366101	CF, 100 ohm
RV17	24366223	CF, 22k ohm
RV18	24366223	CF, 22k ohm

Location No.	Part No.	Description
RV20	24366103	CF, 10k ohm
RV21	24366103	CF, 10k ohm
RV22	24366102	CF, 1k ohm
RV24	24366104	CF, 100k ohm
RV25	24366223	CF, 22k ohm
RV26	24366101	CF, 100 ohm
RV27	24366331	CF, 330 ohm
RV29	24366102	CF, 1k ohm
RV30	24366102	CF, 1k ohm
RV31	24366102	CF, 1k ohm
RV32	24366332	CF, 3300 ohm
RV33	24366332	CF, 3300 ohm
RV34	24552750	OMF, 75 ohm, 1/2W
RV35	24366101	CF, 100 ohm
RV36	24366102	CF, 1k ohm
RV37	24366101	CF, 100 ohm
RV38	24366101	CF, 100 ohm
RV39	24366101	CF, 100 ohm
RV40	24366102	CF, 1k ohm
RV41	24366101	CF, 100 ohm
RV42	24366101	CF, 100 ohm
RV43	24366123	CF, 12k ohm
RV44	24366103	CF, 10k ohm
RV45	24366820	CF, 82 ohm
RV46	24366820	CF, 82 ohm
RV47	24366103	CF, 10k ohm
RV48	24366103	CF, 10k ohm
RV49	24366680	CF, 68 ohm
RV50	24366910	CF, 91 ohm
RV53	24366680	CF, 68 ohm
RV54	24366152	CF, 1500 ohm
RV55	24366123	CF, 12k ohm
RV56	24366152	CF, 1500 ohm
RV57	24360910	CF, 91 ohm, 1/8W
RV58	24366103	CF, 10k ohm
RV59	24366750	CF, 75 ohm
RV60	24366220	CF, 22 ohm
RV61	24366510	CF, 51 ohm
RV62	24366510	CF, 51 ohm
RV63	24366220	CF, 22 ohm
RV64	24366220	CF, 22 ohm
RV65	24366510	CF, 51 ohm
RV66	24366223	CF, 22k ohm
RV67	24366223	CF, 22k ohm
RV68	24366471	CF, 470 ohm
RV69	24366471	CF, 470 ohm
RV70	24366104	CF, 100k ohm
RV71	24366104	CF, 100k ohm
RV72	24366104	CF, 100k ohm
RV73	24366104	CF, 100k ohm
RV74	24366104	CF, 100k ohm
RV75	24366104	CF, 100k ohm
RV76	24366102	CF, 1k ohm
RV77	24366102	CF, 1k ohm
RV78	24366102	CF, 1k ohm
RV79	24366102	CF, 1k ohm
RV80	24366102	CF, 1k ohm
RV87	24366102	CF, 1k ohm
RW02	24366101	CF, 100 ohm
RW03	24552750	OMF, 75 ohm, 1/2W
RW06	24366391	CF, 390 ohm
RW08	24366101	CF, 100 ohm
RW09	24366104	CF, 100k ohm
RW10	24366104	CF, 100k ohm

Location No.	Part No.	Description
RW11	24366821	CF, 820 ohm
RW12	24366102	CF, 1k ohm
RW13	24366821	CF, 820 ohm
RW14	24366102	CF, 1k ohm
RW15	24366472	CF, 4700 ohm
RX02	24366102	CF, 1k ohm
RX05	24366101	CF, 100 ohm
RX08	24366101	CF, 100 ohm
RX10	24366101	CF, 100 ohm
RX13	24366102	CF, 1k ohm
RX29	24366102	CF, 1k ohm
RX33	24366332	CF, 3300 ohm
RX60	24366512	CF, 5100 ohm
RX61	24366102	CF, 1k ohm
RX62	24366112	CF, 1100 ohm
~~RX63~~	~~24366512~~	~~CF, 5100 ohm~~
RX64	24366102	CF, 1k ohm
RX65	24366102	CF, 1k ohm
RX66	24366102	CF, 1k ohm
RX67	24552750	OMF, 75 ohm, 1/2W
RX69	24366112	CF, 1100 ohm
RX70	24366202	CF, 2k ohm
RX71	24366202	CF, 2k ohm
RX72	24366202	CF, 2k ohm
RX74	24366473	CF, 47k ohm
RX76	24366103	CF, 10k ohm
RX77	24366203	CF, 20k ohm
RX78	24366393	CF, 39k ohm
RX79	24366681	CF, 680 ohm
RX80	24366821	CF, 820 ohm
RX81	24366471	CF, 470 ohm
RX82	24366821	CF, 820 ohm
RX83	24366332	CF, 3300 ohm
RX84	24366103	CF, 10k ohm
RX85	24366391	CF, 390 ohm
RX86	24366222	CF, 2200 ohm
RX89	24366682	CF, 6800 ohm
RX90	24366102	CF, 1k ohm
RX91	24366102	CF, 1k ohm
RX92	24366102	CF, 1k ohm
RX93	24366102	CF, 1k ohm
RX94	24366472	CF, 4700 ohm
RX95	24366472	CF, 4700 ohm
RX96	24366472	CF, 4700 ohm
RY01	24366102	CF, 1k ohm
RY02	24366681	CF, 680 ohm
RY03	24366681	CF, 680 ohm
RY04	24366102	CF, 1k ohm
RY05	24366101	CF, 100 ohm
RY06	24366101	CF, 100 ohm
RY07	24366122	CF, 1200 ohm
RY08	24366222	CF, 2200 ohm
RY09	24366152	CF, 1500 ohm
RY10	24366223	CF, 22k ohm
RY11	24366202	CF, 2k ohm
RY12	24366302	CF, 3k ohm
RY13	24366512	CF, 5100 ohm
RY14	24366912	CF, 9100 ohm
RY15	24366242	CF, 2400 ohm
RY16	24366561	CF, 560 ohm
RY17	24366561	CF, 560 ohm
RY18	24366182	CF, 1800 ohm
RY20	24366273	CF, 27k ohm
RY22	24366153	CF, 15k ohm

Location No.	Part No.	Description
RY32	24366182	CF, 1800 ohm
RY33	24366362	CF, 3600 ohm
RY34	24366112	CF, 1100 ohm
RY35	24366182	CF, 1800 ohm
RY36	24366183	CF, 18k ohm
RY37	24366431	CF, 430 ohm
RY38	24366223	CF, 22k ohm
RY45	24366472	CF, 4700 ohm
RY48	24366472	CF, 4700 ohm
RY49	24366132	CF, 1300 ohm
RZ30	24366103	CF, 10k ohm
RZ31	24366103	CF, 10k ohm
RZ32	24366473	CF, 47k ohm
RZ33	24366472	CF, 4700 ohm
RZ34	24366103	CF, 10k ohm
~~RZ35~~	~~24366104~~	~~CF, 100k ohm~~
RZ36	24366103	CF, 10k ohm
RZ37	24366472	CF, 4700 ohm
RZ38	24366473	CF, 47k ohm
RZ39	24366472	CF, 4700 ohm
RZ40	24366153	CF, 15k ohm
RZ41	24366103	CF, 10k ohm
RZ42	24366103	CF, 10k ohm
RZ43	24366102	CF, 1k ohm
RZ44	24366102	CF, 1k ohm
RZ45	24366102	CF, 1k ohm
RZ46	24366102	CF, 1k ohm
RZ47	24366102	CF, 1k ohm
RZ48	24366102	CF, 1k ohm
RZ49	24366473	CF, 47k ohm
RZ51	24061776	VR, 200 ohm, 0.3W
RZ52	24061776	VR, 200 ohm, 0.3W
RZ53	24366223	CF, 22k ohm
RZ54	24366104	CF, 100k ohm
RZ55	24366223	CF, 22k ohm
RZ56	24366473	CF, 47k ohm
RZ57	24366101	CF, 100 ohm
RZ58	24366222	CF, 2200 ohm
RZ59	24366222	CF, 2200 ohm
RZ60	24366222	CF, 2200 ohm
RZ61	24366392	CF, 3900 ohm

COILS & TRANSFORMERS

Location No.	Part No.	Description
L101	23238714	Coil, Peaking, TRF4100AJ
L102	23262855	Coil, PIF, TRF1453
L103	23262845	Coil, PIF, TRF1056
L104	23201003	Coil, Choke, TRF9202A
L105	23261985	Coil, RF Choke, TRF9221
L106	23238922	Coil, Peaking, TRF4100AC
L107	23262783	Coil, IF, TRF1105
L108	23238714	Coil, Peaking, TRF4100AJ
L109	23238922	Coil, Peaking, TRF4100AC
L110	23238923	Coil, Peaking, TRF4829AC
L112	23262663	Coil, IF, TRF1157T
L113	23262813	Coil, IF, TRF1077D
L311	23261974	Coil, Choke, HC5-035
L401	23238918	Coil, Peaking, TRF4220AC
L411	23103859	Coil (Ferrite Bead), TEM2011
L412	23103859	Coil (Ferrite Bead), TEM2011
L413	23233069	Coil, Linearity, TLN2121
L461	23221785	Coil, Choke, TLN3161
⚠ L462	23227342	Deflection Yoke, TY-30GB4A
L463	23221936	Coil, Choke, TLN3041

Location No.	Part No.	Description
L464	23221896	Coil, Choke, TLN3061
L465	23221968	Coil, Choke, TLN3010
L503	23238922	Coil, Peaking, TRF4100AC
L504	23238921	Coil, Peaking, TRF4120AC
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L590	23237973	Coil, Peaking, TRF4151AC
L591	23237973	Coil, Peaking, TRF4151AC
L592	23237973	Coil, Peaking, TRF4151AC
L593	70131039	Coil, Signal Line, ZBF503D-00
L670	23238921	Coil, Peaking, TRF4120AC
L671	23232946	Coil, Variable, TRF3073D
L802	23221076	Coil, Choke, TLN1015R
L803	23261975	Coil, Choke, TRF9229
L804	23261975	Coil, Choke, TRF9229
L805	23222694	Coil, Width, TLN2026
L806	23103859	Coil (Ferrite Bead), TEM2011
L807	23103859	Coil (Ferrite Bead), TEM2011
L808	23222694	Coil, Width, TLN2026
L809	23222694	Coil, Width, TLN2026
L811	23103859	Coil (Ferrite Bead), TEM2011
L812	23238922	Coil, Peaking, TRF4100AC
L813	23103859	Coil (Ferrite Bead), TEM2011
L814	23103859	Coil (Ferrite Bead), TEM2011
L815	23238916	Coil, Peaking, TRF4330AC
L816	23222694	Coil, Width, TLN2026
⚠ L901	23200679	Coil, Degaussing, TSB2292
LA01	23237999	Coil, Peaking, TRF4109AC
LA02	23262778	Coil, IF, TRF1112
LA03	23221937	Coil, Choke, TLN3040
LG01	23262808	Coil, IF, TRF1082
LK01	23262783	Coil, IF, TRF1105
LK02	23238714	Coil, Peaking, TRF4100AJ
LK04	23262813	Coil, IF, TRF1077D
LK05	23262819	Coil, PIF, TRF1071D
LK06	23238921	Coil, Peaking, TRF4120AC
LK07	23261985	Coil, RF Choke, TRF9221
LK08	23238714	Coil, Peaking, TRF4100AJ
LK09	23238922	Coil, Peaking, TRF4100AC
LK10	23238923	Coil, Peaking, TRF4829AC
LK11	23238924	Coil, Peaking, TRF4689AC
LK13	23232942	Coil, Variable, TRF3077
LK14	23262854	Coil, PIF, TRF1227
LK15	23291999	Coil, Choke, TRF9210
LM01	23262797	Coil, IF, TRF1093D
LM02	23272988	Coil, Chroma Demod, TRF5414
LM03	23272988	Coil, Chroma Demod, TRF5414
LM04	23262798	Coil, IF, TRF1092D
LN02	23238920	Coil, Peaking, TRF4150AC
LP01	23238930	Coil, Peaking, TRF4229AC
LP02	23238768	Coil, Peaking, TRF4681AC
LP03	23238768	Coil, Peaking, TRF4681AC
LP06	23238506	Coil, Peaking, TRF4229AJ
LP07	23238934	Coil, Peaking, TRF4109AC
LP08	23262798	Coil, IF, TRF1092D
LP09	23262797	Coil, IF, TRF1093D
LP10	23238922	Coil, Peaking, TRF4100AC
LP11	23250972	Coil, 1H-Delay Matching, TRF5418D
LP12	23250865	Coil, IF, TRF5414DA
LP13	23250865	Coil, IF, TRF5414DA

Location No.	Part No.	Description
LP14	23238934	Coil, Peaking, TRF4109AC
LP17	23238920	Coil, Peaking, TRF4150AC
LP19	23238930	Coil, Peaking, TRF4229AC
LV01	23237988	Coil, Peaking, TRF4829AC
LX60	23237915	Coil, Peaking, TRF4131AC
LX61	23237915	Coil, Peaking, TRF4131AC
LY03	23237983	Coil, Peaking, TRF4220AC
LY04	23237979	Coil, Peaking, TRF4470AC
⚠ T401	23224915	Transformer, Horiz. Drive, TLN1068
⚠ T461	23236196	Transformer, Flyback, TFB4087AD
T801	23211875	Line Filter, TRF3157
T802	23211934	Line Filter, TRF3133
⚠ T803	23213499	Transformer, Converter, TPW3152
T804	23224917	Transformer, Separation, TLN2122

SEMICONDUCTORS

IC1	23318420	IC, M50541FP
IC2	70119968	IC, M5M4C500L
IC3	23318421	IC, M52686FP
IC4	23318422	IC, M52679FP
IC5	23318422	IC, M52679FP
IC6	23318422	IC, M52679FP
IC101	23318437	IC, μPC1820CA
IC201	23318410	IC, M51494L
IC260	23318244	IC, CX20125
IC303	23119142	IC, AN5521
IC361	23318052	IC, TDA8145
IC405	23318218	IC, μPC7812H
IC501	B0379435	IC, TA8653N
IC604	B0356190	IC, TA7630P
IC605	23318413	IC, LA4282
IC670	B0383400	IC, TA8710S
IC803	23318411	IC, TEA2164
IC806	23318299	IC, L78MR05-FA
IC807	23318412	IC, TEA5170
ICA01	23318448	IC, M37100M8-584
ICA02	23318397	IC, M6M80021P
ICA03	23119182	IC, PD6336C
ICA30	23119441	IC, LA7910
ICG01	23119092	IC, TDA6600
ICG02	B0470522	IC, TC4052BP
ICG03	B0349250	IC, TA75393S
ICH01	23119139	IC, AN5862K
ICH03	23119139	IC, AN5862K
ICK05	23318437	IC, μPC1820CA
ICK15	23318390	IC, TDA4480-2
ICP01	23318419	IC, M52684AP
ICP03	B0470942	IC, TC4094BP
ICP04	23318419	IC, M52684AP
ICP10	B0379435	IC, TA8653N
ICP17	B0475382	IC, TC4538BP
ICS02	B0350000	IC, TA75458P
ICS03	B0350000	IC, TA75458P
ICS04	23318392	IC, AN5262
ICS05	B0470532	IC, TC4053BP
ICS10	B0376856	IC, TA8211AH
ICV07	B0383505	IC, TA8720AN
ICV09	B0325390	IC, TA7347P
ICV10	23318438	IC, M52055P
ICW01	B0383505	IC, TA8720AN

Location No.	Part No.	Description
ICX60	23318418	IC, AN5612
ICY01	23318055	IC, TDA4565
Q102	A6317440	Transistor, 2SC1815-Y
Q103	A6317440	Transistor, 2SC1815-Y
Q104	A6317440	Transistor, 2SC1815-Y
Q105	A6708871	Transistor, 2SC388ATM
Q106	A6317440	Transistor, 2SC1815-Y
Q107	A6708871	Transistor, 2SC388ATM
Q108	A6317440	Transistor, 2SC1815-Y
Q109	A6317440	Transistor, 2SC1815-Y
Q110	A6041860	Transistor, 2SK117-GR
Q111	A6317440	Transistor, 2SC1815-Y
Q112	A6319300	Transistor, 2SC1959-Y
Q113	A6317440	Transistor, 2SC1815-Y
Q114	A6317440	Transistor, 2SC1815-Y
Q115	23314229	Transistor, 2SD1378-O
Q116	A6317440	Transistor, 2SC1815-Y
Q117	A6509140	Transistor, 2SA562TMY
Q118	A6317440	Transistor, 2SC1815-Y
Q119	A6317460	Transistor, 2SC1815-GR
Q120	A6317460	Transistor, 2SC1815-GR
Q202	A6002040	Transistor, RN1204
Q203	A6342200	Transistor, 2SC2878-A
Q204	A6317440	Transistor, 2SC1815-Y
Q205	A6534040	Transistor, 2SA1015-Y
Q261	A6317440	Transistor, 2SC1815-Y
Q262	A6317440	Transistor, 2SC1815-Y
Q263	A6534040	Transistor, 2SA1015-Y
Q301	A6317480	Transistor, 2SC1815-BL
Q303B	23035308	Screw, BTB3X8SZN
Q303C	23030211	Screw, 3X14SN
Q304	A6317440	Transistor, 2SC1815-Y
Q305	A6317440	Transistor, 2SC1815-Y
Q362	A6534040	Transistor, 2SA1015-Y
Q363	A6317440	Transistor, 2SC1815-Y
Q402	A678971D	Transistor, 2SC1569 FA-5
⚠ Q404	A6868757	Transistor, 2SD1428
Q406	A6317440	Transistor, 2SC1815-Y
Q505	A6363200	Transistor, 2SC3619
Q506	A6317440	Transistor, 2SC1815-Y
Q508	A6363200	Transistor, 2SC3619
Q509	A6317440	Transistor, 2SC1815-Y
Q511	A6363200	Transistor, 2SC3619
Q512	A6317440	Transistor, 2SC1815-Y
Q514	A6509120	Transistor, 2SA562TM-O
Q515	A6317440	Transistor, 2SC1815-Y
Q606	A6317440	Transistor, 2SC1815-Y
Q607	A6317440	Transistor, 2SC1815-Y
Q608	A6534040	Transistor, 2SA1015-Y
Q619	A6534040	Transistor, 2SA1015-Y
Q671	A6317440	Transistor, 2SC1815-Y
Q691	A6342200	Transistor, 2SC2878-A
Q692	A6342200	Transistor, 2SC2878-A
Q804	A6366908	Transistor, 2SC4288A FA-1
Q804B	72471082	Screw, BRDT2W3X10SZN
Q805	A6533750	Transistor, 2SA1013-O
Q809	A6317440	Transistor, 2SC1815-Y
Q810	A6328333	Transistor, 2SC2383-Y
Q811	A6534040	Transistor, 2SA1015-Y
Q812	A6842185	Transistor, 2SD553-Y
Q813	A6845743	Transistor, 2SD717-Y
Q814	A6546310	Transistor, 2SA1297Y
Q815	A6317440	Transistor, 2SC1815-Y
Q816	A6867980	Transistor, 2SD1405-V

Location No.	Part No.	Description
Q817	A6321240	Transistor, 2SC2120-Y
QA06	A6317440	Transistor, 2SC1815-Y
QA07	A6534040	Transistor, 2SA1015-Y
QA08	A6317440	Transistor, 2SC1815-Y
QA09	A6317440	Transistor, 2SC1815-Y
QA10	A6534040	Transistor, 2SA1015-Y
QA11	A6534040	Transistor, 2SA1015-Y
QA12	A6317440	Transistor, 2SC1815-Y
QA13	A6534040	Transistor, 2SA1015-Y
QA14	A6317440	Transistor, 2SC1815-Y
QA15	A6041860	Transistor, 2SK117-GR
QA16	A6317440	Transistor, 2SC1815-Y
QA19	A6317440	Transistor, 2SC1815-Y
QB01	A6317440	Transistor, 2SC1815-Y
QB02	A6317440	Transistor, 2SC1815-Y
QB04	A6317440	Transistor, 2SC1815-Y
QG04	A6317440	Transistor, 2SC1815-Y
QG05	A6317440	Transistor, 2SC1815-Y
QG06	A6317440	Transistor, 2SC1815-Y
QG07	A6317440	Transistor, 2SC1815-Y
QG08	A6534040	Transistor, 2SA1015-Y
QG09	A6317440	Transistor, 2SC1815-Y
QG10	A6317440	Transistor, 2SC1815-Y
QG12	A6317440	Transistor, 2SC1815-Y
QH04	A6317440	Transistor, 2SC1815-Y
QH06	A6317440	Transistor, 2SC1815-Y
QH09	A6317440	Transistor, 2SC1815-Y
QH10	A6317460	Transistor, 2SC1815-GR
QH11	A6317440	Transistor, 2SC1815-Y
QH13	A6734585	Transistor, 2SC752GTM-O
QH14	A6317440	Transistor, 2SC1815-Y
QH15	A6734585	Transistor, 2SC752GTM-O
QH16	A6534040	Transistor, 2SA1015-Y
QH17	A6734585	Transistor, 2SC752GTM-O
QK01	A6534040	Transistor, 2SA1015-Y
QK02	A6534040	Transistor, 2SA1015-Y
QK03	A6534040	Transistor, 2SA1015-Y
QK04	23314229	Transistor, 2SD1378-O
QK06	A6317440	Transistor, 2SC1815-Y
QK07	A6509140	Transistor, 2SA562TMY
QK08	A6708871	Transistor, 2SC388ATM
QK09	A6317440	Transistor, 2SC1815-Y
QK10	A6319300	Transistor, 2SC1959-Y
QK11	A6041860	Transistor, 2SK117-GR
QK12	A6317440	Transistor, 2SC1815-Y
QK14	A6708871	Transistor, 2SC388ATM
QK18	A6317440	Transistor, 2SC1815-Y
QN02	A6534040	Transistor, 2SA1015-Y
QN03	A6534040	Transistor, 2SA1015-Y
QN04	A6317440	Transistor, 2SC1815-Y
QN05	A6317440	Transistor, 2SC1815-Y
QN07	A6317440	Transistor, 2SC1815-Y
QN08	A6002040	Transistor, RN1204
QN09	A6002060	Transistor, RN1206
QN10	A6002040	Transistor, RN1204
QN11	A6317440	Transistor, 2SC1815-Y
QP02	A6317440	Transistor, 2SC1815-Y
QP05	A6734585	Transistor, 2SC752GTM-O
QP07	A6534040	Transistor, 2SA1015-Y
QP08	A6534040	Transistor, 2SA1015-Y
QP09	A6317440	Transistor, 2SC1815-Y
QP11	A6002040	Transistor, RN1204
QP13	A6534040	Transistor, 2SA1015-Y
QP14	A6534040	Transistor, 2SA1015-Y

Location No.	Part No.	Description
QP16	A6317440	Transistor, 2SC1815-Y
QP18	A6734585	Transistor, 2SC752GTM-O
QP19	A6317440	Transistor, 2SC1815-Y
QP20	A6002040	Transistor, RN1204
QP21	A6002060	Transistor, RN1206
QS07	A6317440	Transistor, 2SC1815-Y
QS08	A6317440	Transistor, 2SC1815-Y
QS09	A6317440	Transistor, 2SC1815-Y
QS10B	23035308	Screw, BTB3X8SZN
QS10C	23030211	Screw, 3X14SN
QS11	A6317440	Transistor, 2SC1815-Y
QS12	A6317440	Transistor, 2SC1815-Y
QS13	A6534040	Transistor, 2SA1015-Y
QS14	A6534040	Transistor, 2SA1015-Y
QV01	A6317440	Transistor, 2SC1815-Y
QV02	A6317440	Transistor, 2SC1815-Y
QV03	A6317440	Transistor, 2SC1815-Y
QV04	A6342200	Transistor, 2SC2878-A
QV05	A6317440	Transistor, 2SC1815-Y
QV06	A6534040	Transistor, 2SA1015-Y
QV08	A6534040	Transistor, 2SA1015-Y
QV11	A6317440	Transistor, 2SC1815-Y
QV12	A6317440	Transistor, 2SC1815-Y
QV13	A6342200	Transistor, 2SC2878-A
QV14	A6342200	Transistor, 2SC2878-A
QV16	A6534040	Transistor, 2SA1015-Y
QW03	A6534040	Transistor, 2SA1015-Y
QW04	A6317440	Transistor, 2SC1815-Y
QX61	A6534040	Transistor, 2SA1015-Y
QX62	A6534040	Transistor, 2SA1015-Y
QX63	A6534040	Transistor, 2SA1015-Y
QX64	A6317440	Transistor, 2SC1815-Y
QX65	A6534040	Transistor, 2SA1015-Y
QX66	A6534040	Transistor, 2SA1015-Y
QX67	A6534040	Transistor, 2SA1015-Y
QY05	A6534040	Transistor, 2SA1015-Y
QY08	A6317440	Transistor, 2SC1815-Y
QY09	A6317440	Transistor, 2SC1815-Y
QY10	A6317440	Transistor, 2SC1815-Y
QY11	A6317440	Transistor, 2SC1815-Y
QY12	A6317440	Transistor, 2SC1815-Y
QY13	A6534040	Transistor, 2SA1015-Y
QY15	A6342200	Transistor, 2SC2878-A
QY16	A6317440	Transistor, 2SC1815-Y
QZ30	A6534040	Transistor, 2SA1015-Y
QZ31	A6534040	Transistor, 2SA1015-Y
QZ32	A6317440	Transistor, 2SC1815-Y
QZ36	A6534040	Transistor, 2SA1015-Y
QZ37	A6317440	Transistor, 2SC1815-Y
QZ38	A6317440	Transistor, 2SC1815-Y
D101	A7288601	Diode, 1S2186 FA-1
D102	A7288601	Diode, 1S2186 FA-1
D103	A7288601	Diode, 1S2186 FA-1
D104	A7288601	Diode, 1S2186 FA-1
D106	A7288601	Diode, 1S2186 FA-1
D107	A7288601	Diode, 1S2186 FA-1
D108	A7116305	Diode, Zener, 04AZ5.1X
D109	A7288601	Diode, 1S2186 FA-1
D110	A7288601	Diode, 1S2186 FA-1
D111	A7117015	Diode, Zener, 04AZ10Y
D201	A7288601	Diode, 1S2186 FA-1
D241	A7150041	Diode, 1SS104
D260	A7150258	Diode, 1SS176
D262	A7115605	Diode, Zener, 04AZ2.7X

Location No.	Part No.	Description
D263	A7150258	Diode, 1SS176
D302	A7568250	Diode, 1S1834
D303	23118977	Diode, ERC01-02FL
D315	A7116715	Diode, Zener, 04AZ7.5Y
D316	A7117615	Diode, Zener, 04AZ18Y
D317	A7150258	Diode, 1SS176
D320	A7150258	Diode, 1SS176
D321	A7150258	Diode, 1SS176
D362	A7150258	Diode, 1SS176
D364	A7116715	Diode, Zener, 04AZ7.5Y
D366	A7116215	Diode, Zener, 04AZ4.7Y
D367	A7150258	Diode, 1SS176
D368	A7118115	Diode, Zener, 04AZ30Y
D401	A7116925	Diode, Zener, 04AZ9.1Z
D402	A7117215	Diode, Zener, 04AZ12Y
D405	A7117715	Diode, Zener, 04AZ20Y
D406	A7978850	Diode, S5295G
D408	23118451	Diode, RU4A
D410	A7116815	Diode, Zener, 04AZ8.2Y
D440	23316254	Diode, ERC06-15
D441	A7580656	Diode, 3JH61 (FA2)
D594	A7150258	Diode, 1SS176
D595	A7150258	Diode, 1SS176
D596	A7150258	Diode, 1SS176
D614	A7150258	Diode, 1SS176
D615	A7150258	Diode, 1SS176
D617	A7150258	Diode, 1SS176
D618	A7150258	Diode, 1SS176
D619	A7150258	Diode, 1SS176
D620	A7150258	Diode, 1SS176
D803	23316275	Diode, RBV606 LF-A
D807	A7978850	Diode, S5295G
D808	A7978850	Diode, S5295G
D809	A7978850	Diode, S5295G
D810	A7568300	Diode, 1S1835
D811	A7117415	Diode, Zener, 04AZ15Y
D812	A7978850	Diode, S5295G
D813	A7978850	Diode, S5295G
D814	A7978850	Diode, S5295G
D815	A7978850	Diode, S5295G
D816	A7978850	Diode, S5295G
D817	23118451	Diode, RU4A
D818	23118338	Diode, RU4AM
D819	A7568300	Diode, 1S1835
D820	A7116615	Diode, Zener, 04AZ6.8Y
D821	A7150258	Diode, 1SS176
D822	A7275400	Diode, 1S2462
D823	A7275400	Diode, 1S2462
D824	A7150258	Diode, 1SS176
D825	A7116505	Diode, Zener, 04AZ6.2X
D826	23118338	Diode, RU4AM
D827	A7117305	Diode, Zener, 04AZ13X
D828	23118338	Diode, RU4AM
D829	23118451	Diode, RU4A
D830	A7150258	Diode, 1SS176
D832	A7116615	Diode, Zener, 04AZ6.8Y
D833	A7978850	Diode, S5295G
D834	A7116615	Diode, Zener, 04AZ6.8Y
D835	A7150258	Diode, 1SS176
D836	A7150258	Diode, 1SS176
D837	A7568300	Diode, 1S1835
DA03	A7150258	Diode, 1SS176
DA08	A7150258	Diode, 1SS176
DA09	A7150258	Diode, 1SS176

Location No.	Part No.	Description
DA10	23115878	Diode, Zener, μPC574J(L)
DA11	A7150258	Diode, 1SS176
DA12	A7150258	Diode, 1SS176
DA17	A7150258	Diode, 1SS176
DA18	A7150258	Diode, 1SS176
DA19	A7150258	Diode, 1SS176
DA20	A7150258	Diode, 1SS176
DA21	A7150258	Diode, 1SS176
DA22	A7150258	Diode, 1SS176
DA23	A7150258	Diode, 1SS176
DA24	A7150258	Diode, 1SS176
DA25	A7150258	Diode, 1SS176
DA27	A7150258	Diode, 1SS176
DA28	A7150258	Diode, 1SS176
DA30	A7150258	Diode, 1SS176
DA31	A7150258	Diode, 1SS176
DA32	A7150258	Diode, 1SS176
DA33	A7150258	Diode, 1SS176
DB40	A7150258	Diode, 1SS176
DE55	A8636540	Diode (LED), TLS153, Red
DG01	A7150258	Diode, 1SS176
DG02	A7150258	Diode, 1SS176
DG03	A7150258	Diode, 1SS176
DG04	A7150258	Diode, 1SS176
DG05	A7150258	Diode, 1SS176
DG55	A8612100	Diode (LED), TLO153, Orange
DG56	A8612100	Diode (LED), TLO153, Orange
DH01	A7150258	Diode, 1SS176
DH02	A7150258	Diode, 1SS176
DH03	A7150258	Diode, 1SS176
DH08	A7150258	Diode, 1SS176
DH10	A7150258	Diode, 1SS176
DH11	A7150258	Diode, 1SS176
DH12	A7150258	Diode, 1SS176
DH13	A7150258	Diode, 1SS176
DH14	A7150258	Diode, 1SS176
DH15	A7150258	Diode, 1SS176
DH23	A7150258	Diode, 1SS176
DH24	A7150258	Diode, 1SS176
DH25	A7150258	Diode, 1SS176
DH29	A7150258	Diode, 1SS176
DH30	A7150258	Diode, 1SS176
DH31	A7150258	Diode, 1SS176
DH32	A7150258	Diode, 1SS176
DK01	A7117015	Diode, Zener, 04AZ10Y
DK02	A7150258	Diode, 1SS176
DP01	A7116925	Diode, Zener, 04AZ9.1Z
DP02	A7150258	Diode, 1SS176
DP05	A7150258	Diode, 1SS176
DS01	A7150258	Diode, 1SS176
DS02	A7150258	Diode, 1SS176
DS03	A7150258	Diode, 1SS176
DS04	A7150258	Diode, 1SS176
DS05	A7150258	Diode, 1SS176
DS06	A7150258	Diode, 1SS176
DS07	A7150258	Diode, 1SS176
DS08	A7150258	Diode, 1SS176
DS10	A7150258	Diode, 1SS176
DS11	A7150258	Diode, 1SS176
DS55	A8608780	Diode (LED), TLY153, Yellow
DV01	A7150258	Diode, 1SS176

Location No.	Part No.	Description
DV05	A7116915	Diode, Zener, 04AZ9.1Y
DV06	A7150258	Diode, 1SS176
DV07	A7150258	Diode, 1SS176
DW01	A7116925	Diode, Zener, 04AZ9.1Z
DW02	A7150258	Diode, 1SS176
DW03	A7150258	Diode, 1SS176
DX01	A7116915	Diode, Zener, 04AZ9.1Y
DX02	A7150258	Diode, 1SS176
DZ33	A7150258	Diode, 1SS176
DZ34	A7150258	Diode, 1SS176
DZ35	A7150258	Diode, 1SS176
DZ36	A7150258	Diode, 1SS176

MISCELLANEOUS

Location No.	Part No.	Description
B202	23864325	Frame, Back Terminal
⚠ F801	23144868	Fuse, 3.15A
F801A	23165102	Fuse Holder
H003	23107494	Aerial Divider
K901	23120610	Remote Sensor, IR-9101-K
P003	23161702	Terminal, 8P
P661	23363607	Headphone Jack, 3.5mm
⚠ P801	23176704	Power Cord
PV03	23363871	Pin Jack, Red
PV04	23363873	Pin Jack, White
PV05	23363871	Pin Jack, Red
PV06	23363873	Pin Jack, White
PV07	23902604	Socket, 21P
PV08	23902604	Socket, 21P
PV40	23365259	Jack, 4P
S101	23145406	Switch, Slide, 2C3P
S201	23145579	Switch, Push, 2C2P
S202	23145318	Switch, Slide, 2C3P
S301	23145542	Switch, Lever, 1C3P
⚠ S801	23145434	Switch, Power, 2C2P
SA01	23145428	Switch, Push, 1C1Px4
SA02	23145428	Switch, Push, 1C1Px4
SA03	23145428	Switch, Push, 1C1Px4
SA04	23145428	Switch, Push, 1C1Px4
SA05	23145428	Switch, Push, 1C1Px4
SA06	23145428	Switch, Push, 1C1Px4
SA07	23145428	Switch, Push, 1C1Px4
SA08	23145428	Switch, Push, 1C1Px4
SA09	23145429	Switch, Push, 1C1Px3
SA10	23145429	Switch, Push, 1C1Px3
SA11	23145429	Switch, Push, 1C1Px3
SA12	23145476	Switch, Push, 1C1P
SK01	23145411	Switch, Slide, 2C2P
⚠ V901A	23902019	Socket, CRT, 10P
V901M	23102898	Magnet, Purity-Convergence, TP-12300
W201	23250878	Coil, Delay Line, TRF2083
W661	23151214	Speaker, SPK-1217, 20x20mm, 2100 ohm
W661	23151214	Speaker, SPK-1217, 20x20mm, 2100 ohm
W662	23151263	Speaker, SPK-1263, 100x100mm, 8 ohm
W662	23151263	Speaker, SPK-1263, 100x100mm, 8 ohm
WP02	23250925	Coil, Delay Line, TRF2065A
WP03	23250926	Coil, Delay Line, TRF2065
WX60	23250927	Coil, Delay Line, TRF2064
X101	23153725	Ceramic Resonator, TCR1043

Location No.	Part No.	Description
DA10	23115878	Diode, Zener, μPC574J(L)
DA11	A7150258	Diode, 1SS176
DA12	A7150258	Diode, 1SS176
DA17	A7150258	Diode, 1SS176
DA18	A7150258	Diode, 1SS176
DA19	A7150258	Diode, 1SS176
DA20	A7150258	Diode, 1SS176
DA21	A7150258	Diode, 1SS176
DA22	A7150258	Diode, 1SS176
DA23	A7150258	Diode, 1SS176
DA24	A7150258	Diode, 1SS176
DA25	A7150258	Diode, 1SS176
DA27	A7150258	Diode, 1SS176
DA28	A7150258	Diode, 1SS176
DA30	A7150258	Diode, 1SS176
DA31	A7150258	Diode, 1SS176
DA32	A7150258	Diode, 1SS176
DA33	A7150258	Diode, 1SS176
DB40	A7150258	Diode, 1SS176
DE55	A8636540	Diode (LED), TLS153, Red
DG01	A7150258	Diode, 1SS176
DG02	A7150258	Diode, 1SS176
DG03	A7150258	Diode, 1SS176
DG04	A7150258	Diode, 1SS176
DG05	A7150258	Diode, 1SS176
DG55	A8612100	Diode (LED), TLO153, Orange
DG56	A8612100	Diode (LED), TLO153, Orange
DH01	A7150258	Diode, 1SS176
DH02	A7150258	Diode, 1SS176
DH03	A7150258	Diode, 1SS176
DH08	A7150258	Diode, 1SS176
DH10	A7150258	Diode, 1SS176
DH11	A7150258	Diode, 1SS176
DH12	A7150258	Diode, 1SS176
DH13	A7150258	Diode, 1SS176
DH14	A7150258	Diode, 1SS176
DH15	A7150258	Diode, 1SS176
DH23	A7150258	Diode, 1SS176
DH24	A7150258	Diode, 1SS176
DH25	A7150258	Diode, 1SS176
DH29	A7150258	Diode, 1SS176
DH30	A7150258	Diode, 1SS176
DH31	A7150258	Diode, 1SS176
DH32	A7150258	Diode, 1SS176
DK01	A7117015	Diode, Zener, 04AZ10Y
DK02	A7150258	Diode, 1SS176
DP01	A7116925	Diode, Zener, 04AZ9.1Z
DP02	A7150258	Diode, 1SS176
DP05	A7150258	Diode, 1SS176
DS01	A7150258	Diode, 1SS176
DS02	A7150258	Diode, 1SS176
DS03	A7150258	Diode, 1SS176
DS04	A7150258	Diode, 1SS176
DS05	A7150258	Diode, 1SS176
DS06	A7150258	Diode, 1SS176
DS07	A7150258	Diode, 1SS176
DS08	A7150258	Diode, 1SS176
DS10	A7150258	Diode, 1SS176
DS11	A7150258	Diode, 1SS176
DS55	A8608780	Diode (LED), TLY153, Yellow
DV01	A7150258	Diode, 1SS176
DV05	A7116915	Diode, Zener, 04AZ9.1Y
DV06	A7150258	Diode, 1SS176
DV07	A7150258	Diode, 1SS176
DW01	A7116925	Diode, Zener, 04AZ9.1Z
DW02	A7150258	Diode, 1SS176
DW03	A7150258	Diode, 1SS176
DX01	A7116915	Diode, Zener, 04AZ9.1Y
DX02	A7150258	Diode, 1SS176
DZ33	A7150258	Diode, 1SS176
DZ34	A7150258	Diode, 1SS176
DZ35	A7150258	Diode, 1SS176
DZ36	A7150258	Diode, 1SS176
MISCELLANEOUS		
B202	23864325	Frame, Back Terminal
⚠ F801	23144868	Fuse, 3.15A
F801A	23165102	Fuse Holder
H003	23107494	Aerial Divider
K901	23120610	Remote Sensor, IR-9101-K
P003	23161702	Terminal, 8P
P661	23363607	Headphone Jack, 3.5mm
⚠ P801	23176704	Power Cord
PV03	23363871	Pin Jack, Red
PV04	23363873	Pin Jack, White
PV05	23363871	Pin Jack, Red
PV06	23363873	Pin Jack, White
PV07	23902604	Socket, 21P
PV08	23902604	Socket, 21P
PV40	23365259	Jack, 4P
S101	23145406	Switch, Slide, 2C3P
S201	23145579	Switch, Push, 2C2P
S202	23145318	Switch, Slide, 2C3P
S301	23145542	Switch, Lever, 1C3P
⚠ S801	23145434	Switch, Power, 2C2P
SA01	23145428	Switch, Push, 1C1Px4
SA02	23145428	Switch, Push, 1C1Px4
SA03	23145428	Switch, Push, 1C1Px4
SA04	23145428	Switch, Push, 1C1Px4
SA05	23145428	Switch, Push, 1C1Px4
SA06	23145428	Switch, Push, 1C1Px4
SA07	23145428	Switch, Push, 1C1Px4
SA08	23145428	Switch, Push, 1C1Px4
SA09	23145429	Switch, Push, 1C1Px3
SA10	23145429	Switch, Push, 1C1Px3
SA11	23145429	Switch, Push, 1C1Px3
SA12	23145476	Switch, Push, 1C1P
SK01	23145411	Switch, Slide, 2C2P
⚠ V901A	23902019	Socket, CRT, 10P
V901M	23102898	Magnet, Purity-Convergence, TP-12300
W201	23250878	Coil, Delay Line, TRF2083
W661	23151214	Speaker, SPK-1217, 20x20mm, 2100 ohm
W661	23151214	Speaker, SPK-1217, 20x20mm, 2100 ohm
W662	23151263	Speaker, SPK-1263, 100x100mm, 8 ohm
W662	23151263	Speaker, SPK-1263, 100x100mm, 8 ohm
WP02	23250925	Coil, Delay Line, TRF2065A
WP03	23250926	Coil, Delay Line, TRF2065
WX60	23250927	Coil, Delay Line, TRF2064
X101	23153725	Ceramic Resonator, TCR1043

Location No.	Part No.	Description
X401	23153886	Ceramic Resonator, 503kHz, TCR1012
X501	23153979	Crystal, 4.43MHz
X502	23153797	Coil, 1H-Delay Line, PAL, ED645A41T
XA01	23153860	Crystal, 32.768kHz
XK01	23153725	Ceramic Resonator, TCR1043
XP02	23153979	Crystal, 4.43MHz
XP03	23153797	Coil, 1H-Delay Line, PAL, ED645A41T
XP04	23153886	Ceramic Resonator, 503kHz, TCR1012
Z101	A5611197	PIF SAW Filter, F1038F
Z102	A5615257	SIF SAW Filter, F1808D
Z104	23107911	Ceramic Video Trap, 5.5 to 6MHz, TCF1019
Z105	23107658	Ceramic Video Trap, 5.74MHz, TCF1052
Z106	23107944	Ceramic Video Trap, 6.5MHz, TPS6.5MB7
Z670	23107947	Ceramic Filter, 5.5MHz, SFE5.5MBF
Z671	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
Z672	23107949	Ceramic Filter, 6.5MHz, SFE6.5MBF
Z673	23153900	Ceramic Resonator, 500kHz, TCR1010
Z674	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
ZA01	24000516	Resistor Block, 4700 ohmx3, 1/10W
ZA02	24000548	Resistor Block, 47k ohmx4, 1/10W
ZA04	24000521	Resistor Block, 4700 ohmx8, 1/10W
ZA05	24000428	Resistor Block, 47k ohmx8, 1/10W
ZA07	24000516	Resistor Block, 4700 ohmx3, 1/10W
ZA08	24094651	Capacitor Block, 100pFx4, 50V
ZA09	23153741	Ceramic Resonator, TCR1029
ZK01	A5611192	PIF SAW Filter, F1037C
ZK02	23107947	Ceramic Filter, 5.5MHz, SFE5.5MBF
ZK03	23107944	Ceramic Video Trap, 6.5MHz, TPS6.5MB7
ZK04	23107911	Ceramic Video Trap, 5.5 to 6MHz, TCF1019
ZK05	23107658	Ceramic Video Trap, 5.74MHz, TCF1052
ZK06	A5613025	PIF SAW Filter, F328EM
ZK07	23107897	Ceramic Video Trap, 5.5MHz, TCF1023
ZP03	23148739	PIP HIC Unit, TY880073
ZP03A	23116915	Socket, 9P, IC
ZP03B	23116949	Socket, 7P, IC
ZP04	23107747	Filter, 3MHz, TEM1009
ZP06	23107746	Filter, 3MHz, TEM1010
ZP07	23107748	Filter, 3MHz, TEM1008
ZP08	23107746	Filter, 3MHz, TEM1010
ZP09	23107746	Filter, 3MHz, TEM1010
ZP10	23107746	Filter, 3MHz, TEM1010

Location No.	Part No.	Description
ZP11	23107748	Filter, 3MHz, TEM1008
ZP12	23107746	Filter, 3MHz, TEM1010
ZP13	23107746	Filter, 3MHz, TEM1010
ZP15	23107748	Filter, 3MHz, TEM1008
ZP16	23107746	Filter, 3MHz, TEM1010
ZP17	23107746	Filter, 3MHz, TEM1010
ZP18	23107746	Filter, 3MHz, TEM1010
ZP19	23107746	Filter, 3MHz, TEM1010
ZP20	23107746	Filter, 3MHz, TEM1010
ZP22	23107746	Filter, 3MHz, TEM1010
ZP23	23107746	Filter, 3MHz, TEM1010
ZP24	23107746	Filter, 3MHz, TEM1010
ZP25	23107746	Filter, 3MHz, TEM1010
ZP26	23107746	Filter, 3MHz, TEM1010
ZP27	23107746	Filter, 3MHz, TEM1010
ZP28	23107746	Filter, 3MHz, TEM1010
ZP30	23107746	Filter, 3MHz, TEM1010
ZP31	23107746	Filter, 3MHz, TEM1010
ZP32	23107746	Filter, 3MHz, TEM1010
ZV01	23107849	Ceramic Video Trap, 4.43MHz, TCF1032

PC BOARD ASSEMBLIES

U902	23335731	Main Board, PW9198
U903	23335732	Power DEF. Board, PW9199
U904A	23335735	CRT Drive Board, PW9200-1
U904B	23335736	Back Terminal Board, PW9200-2
U904C	23335737	CTI Board, PW9200-3
U904D	23335738	R.G.B. Board, PW9200-4
U904E	23335739	PIF Board, PW9200-5
U904F	23335740	LED Board, PW9200-6
U904G	23335741	IR-Amp Board, PW9200-7
U905A	23335742	PIP Board, PW9201-1
U905B	23335743	DPC-2 Board, PW9201-2
U905C	23335744	DPC-1 Board, PW9201-3
U905D	23335745	Control Board, PW9201-4

PICTURE TUBE

⚠ V901	A5529439	Picture Tube, A70JYQ96X

TUNER

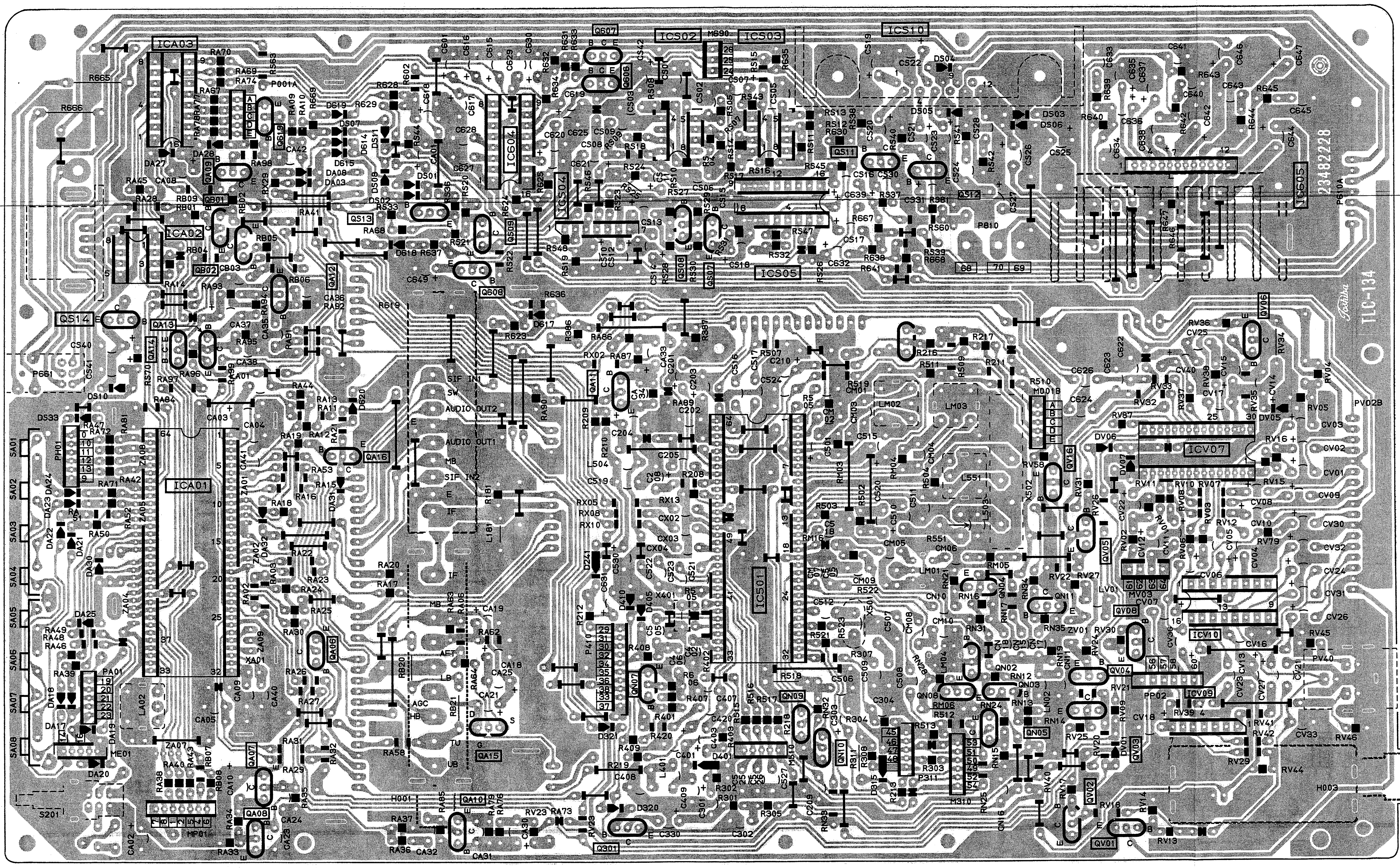
H001	23121736	Tuner, UHF, EF432S
H002	23121737	Tuner, EG731A

REMOTE HAND SET PARTS

K902	23120492	Remote Hand Unit, CT9386
AT01	23300892	Upper Case
AT02	23300759	Lower Case
AT03	23300760	Battery Cover
AT04	23309657	Filter
ST01	23300893	Rubber Sheet
UT01	23335512	PC Board, PW6970
ZT01	23153736	Ceramic Resonator, CSB455EB20

MAIN BOARD PW9198

BOTTOM (FOIL) SIDE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H001
H003
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P610A
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SW
AUDIO OUT2
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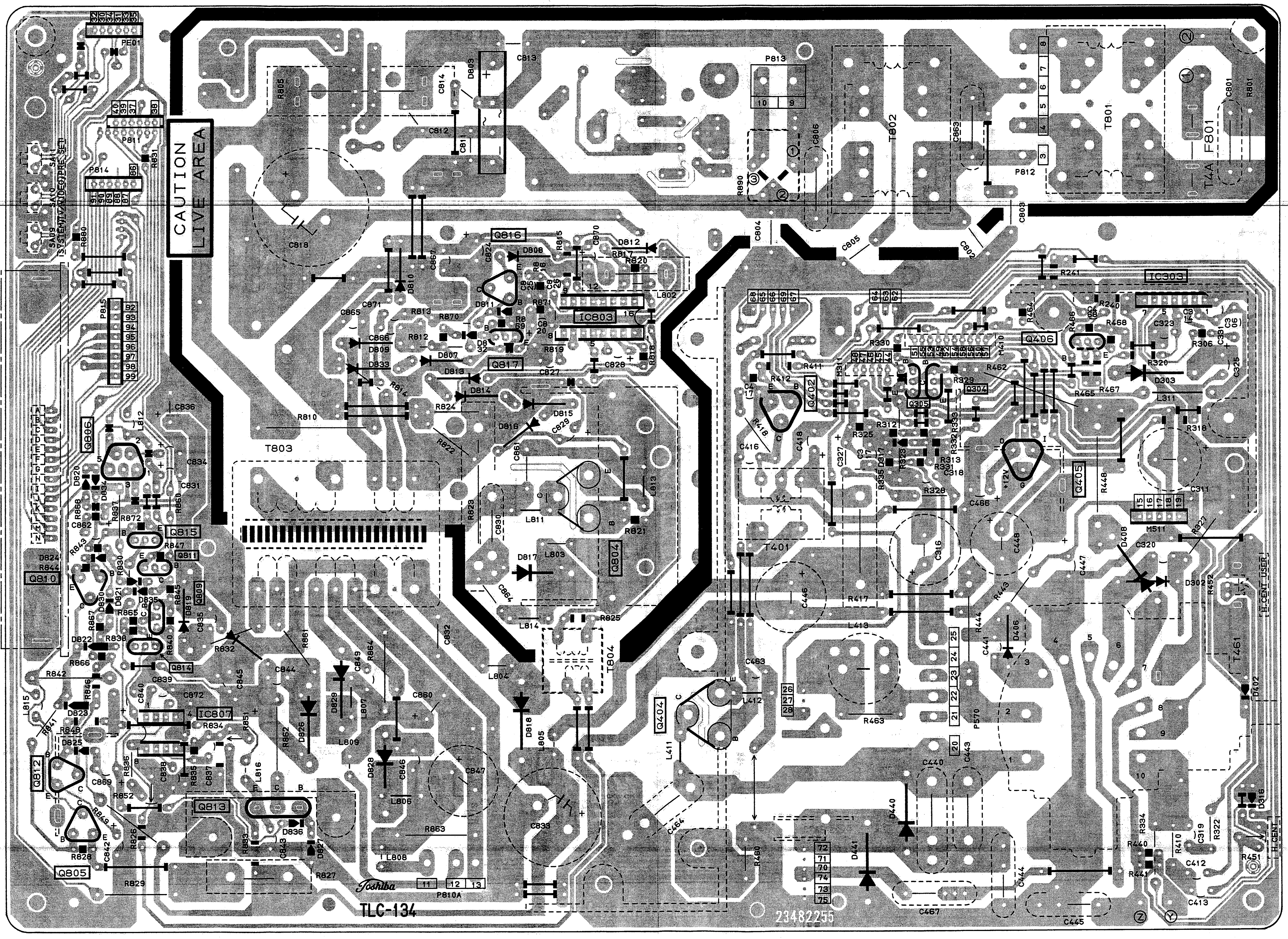
AGC
HB
TU
UB

POWER/DEF BOARD PW9199

BOTTOM (FOIL) SIDE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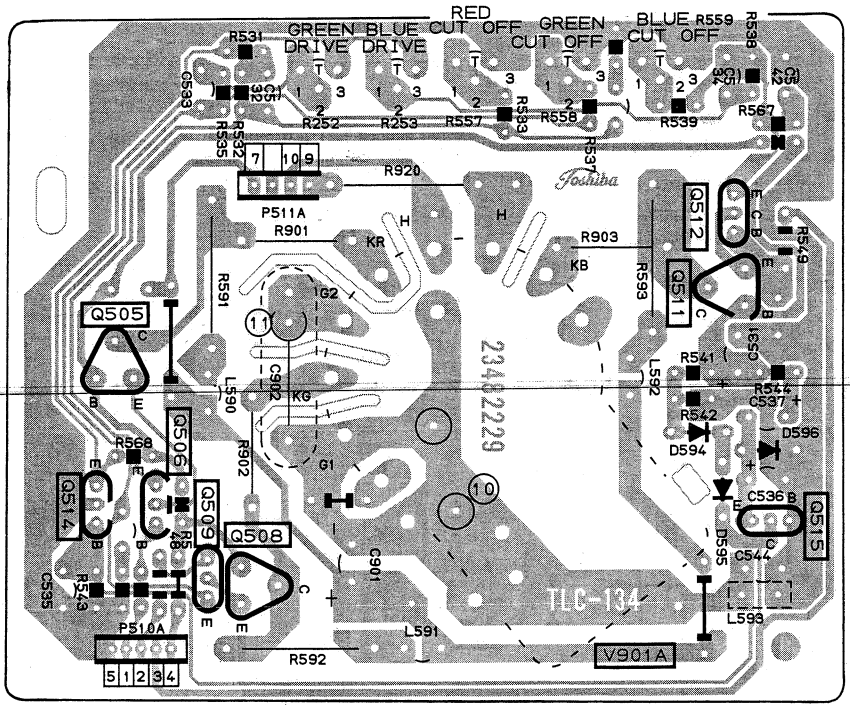
CRT DRIVE BOARD PW9200-1

BOTTOM (FOIL) SIDE



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GREEN DRIVE
BLUE DRIVE
GREEN CUT OFF
BLUE CUT OFF
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R538
R531
C533
C532
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R253
R557
R539
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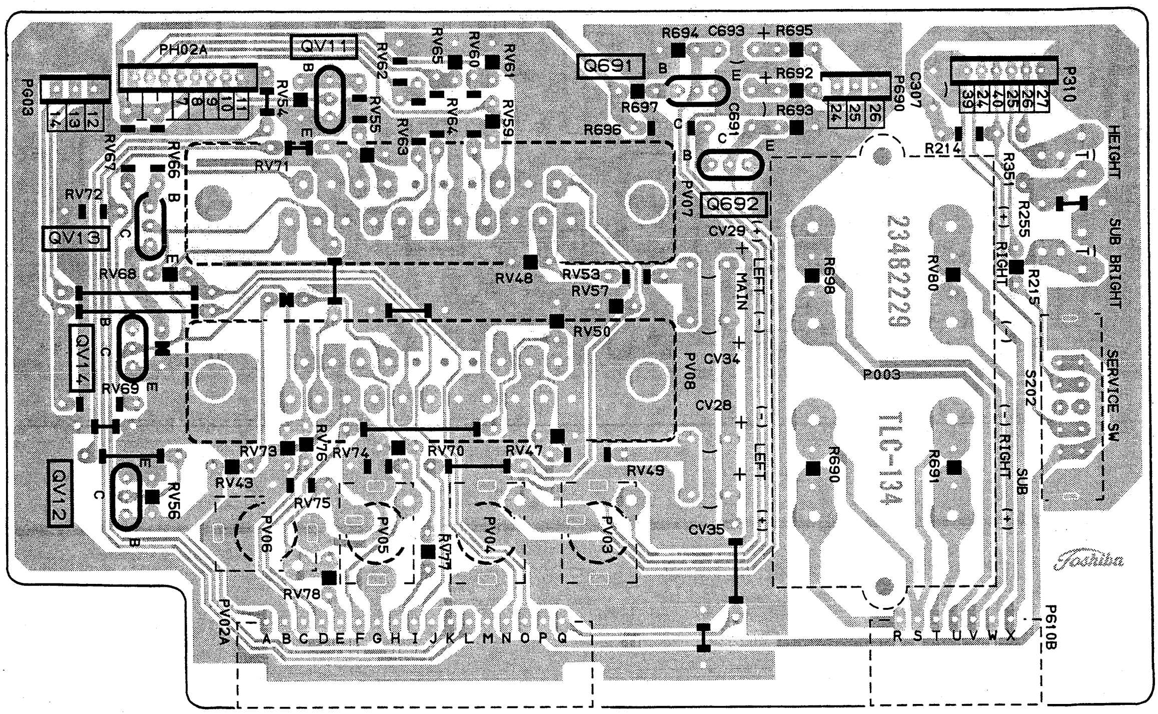
Toshiba

BACK TERMINAL BOARD PW9200-2

BOTTOM (FOIL) SIDE



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R696
P690
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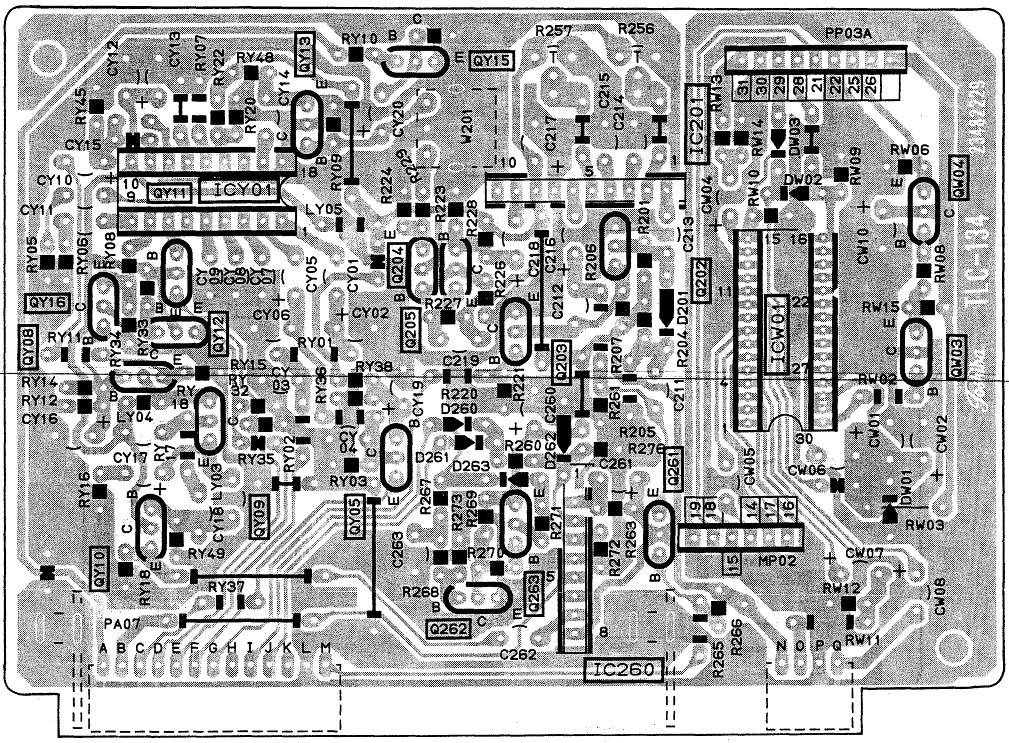
Toshiba

CTI BOARD PW9200-3

BOTTOM (FOIL) SIDE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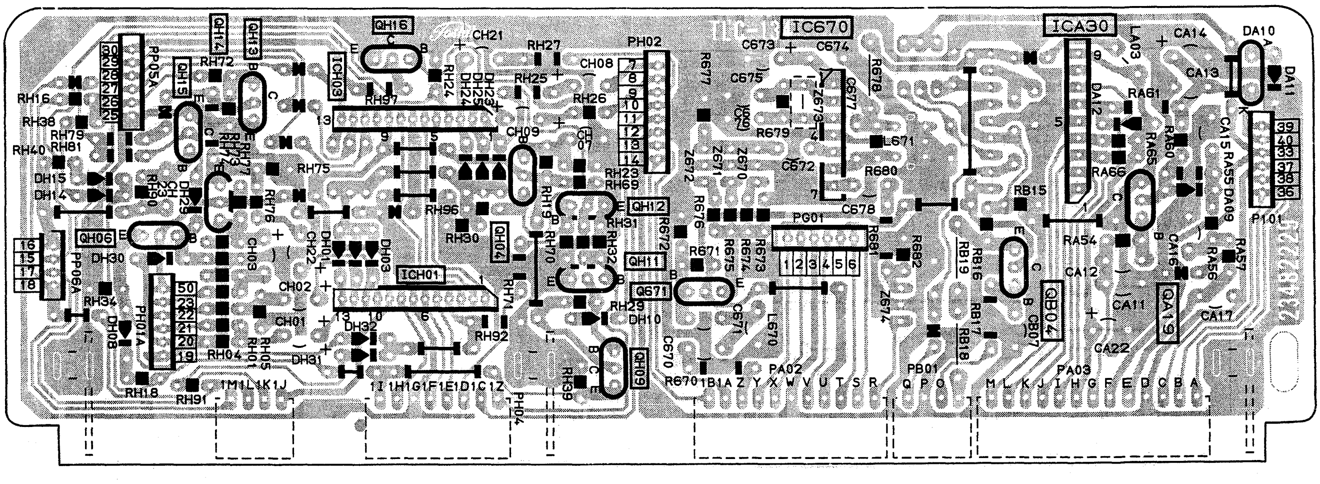
LY03
LY04
LY05
W201
R223
R224
R226
R227
R228
C212
C214
C215
C216
C217
C218
A B C D E F G H I J K L M
N O P Q
31 30 29 28 21 22 25 26
19 18 14 17 16 15
TLC-134
23482229

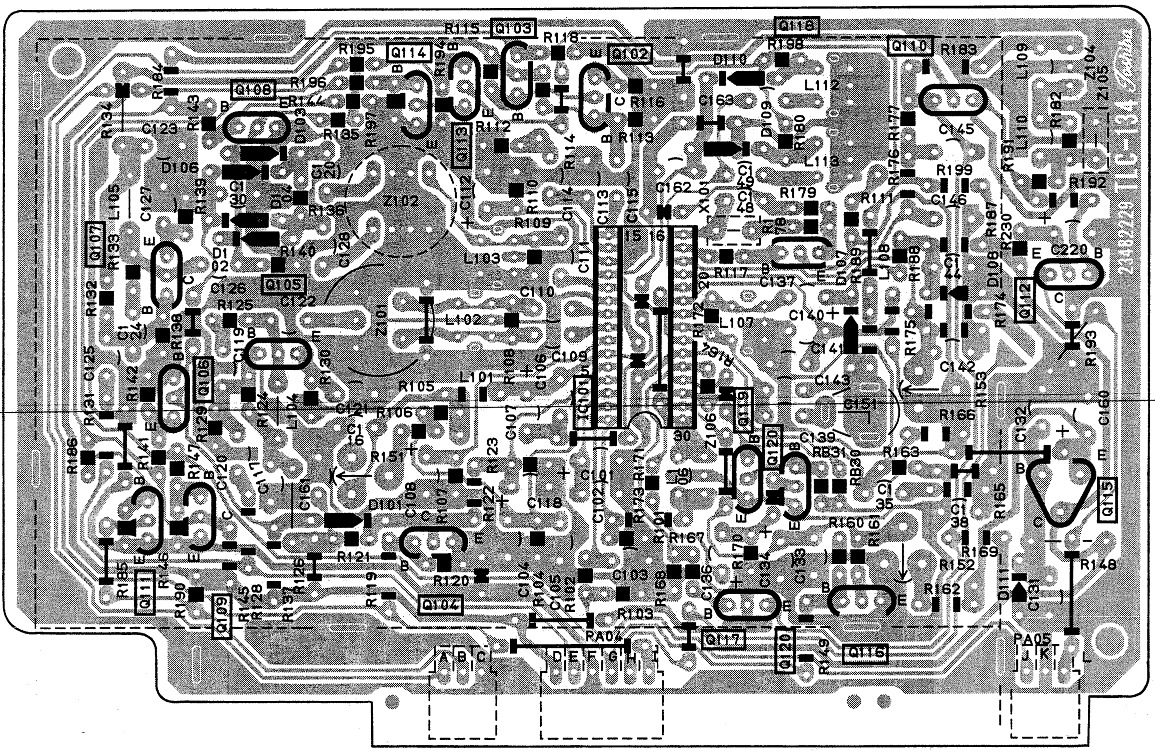
R.G.B. BOARD PW9200-4

BOTTOM (FOIL) SIDE


IC670
ICA30
ICH01
ICH03
QH16
QH14
QH13
QH15
QH06
QH12
QH11
QH09
QH04
Q671
QB04
QA19
PP05A
PP06A
PP01A
PH02
PG01
PA02
PB01
PA03
PH04
P101
CH21
RH27
CH08
RH25
RH26
RH24
RH97
RH72
RH16
RH38
RH79
RH81
RH40
DH15
DH14
DH30
DH29
RH34
DH08
RH18
RH91
RH04
CH01
CH02
DH31
DH32
RH92
RH75
RH76
RH96
RH30
RH23
RH69
RH31
RH29
DH10
RH39
CH09
C673
C674
C675
C677
C672
C678
C670
C671
R670
R671
R672
R673
R674
R675
R676
R677
R678
R679
R680
R681
R682
L671
L670
RB15
RB16
RB17
RB18
RB19
CB07
RA54
RA55
RA56
RA57
RA61
RA65
RA66
CA11
CA12
CA13
CA14
CA15
CA16
CA17
CA22
DA09
DA10
DA11
DA12
LA03
1M 1L 1K 1J
1I 1H 1G 1F 1E 1D 1C 1Z
1B 1A Z Y X W V U T S R
Q P O
M L K J I H G F E D C B A
39 40 33 37 38 36
16 15 17 18
50 23 22 21 20 19
1 2 3 4 5 6
TLC-13
23482227

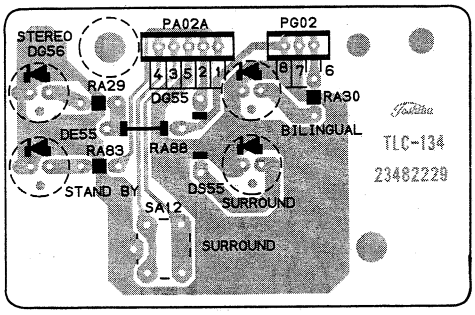
IF BOARD PW9200-5

BOTTOM (FOIL) SIDE


Q103
Q118
R115
R118
R198
Q110
R183
L109
Z104
Z105
R195
Q114
Q102
D110
L112
R182
R196
R144
R116
C163
D109
Q108
R143
R134
R184
C123
D103
R135
R197
Q113
R112
R114
R113
R180
L113
C145
R176
R177
R199
R191
L110
R192
C146
D106
L105
C127
R139
C130
C120
R136
Z102
C112
R110
C114
C162
X101
C148
R179
R111
R187
R230
C220
Q107
R133
D102
R140
C128
R109
C113
C115
R178
Q105
L103
C111
R117
C137
D107
R189
L108
R188
C144
D108
Q112
R132
C126
R125
C122
C110
R172
L107
C140
R174
R193
C124
R138
C119
Z101
L102
R164
C141
R175
C142
R142
C125
Q106
R130
R108
C106
C109
C143
R153
R131
R105
L101
IC101
Z106
Q119
G151
R166
C132
C160
R124
L104
C121
R106
C116
C107
R186
R141
R129
R147
R151
R123
R171
C139
Q120
RB31
RB30
R163
C135
C138
R165
Q115
C120
C117
C161
D101
C108
R107
R122
C118
C102
C101
R173
R160
R161
R169
R185
Q111
R146
R167
R170
C134
C133
R152
R148
R121
R126
R120
C104
C105
R103
C136
R162
D111
C131
R190
R145
R128
R137
R119
Q104
R104
R102
RA04
Q117
Q120
R149
Q116
PA05
Q109
A
B
C
D
E
F
G
H
I
J
K
L
B
C
E
TLC-134
23482229
Toshiba

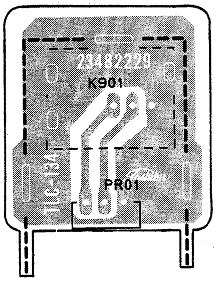
LED BOARD PW9200-6

BOTTOM (FOIL) SIDE


STEREO
DG56
PA02A
PG02
4
3
5
2
1
8
7
6
RA29
DG55
RA30
DE55
BILINGUAL
RA83
RA88
STAND BY
D555
SA12
SURROUND
SURROUND
Toshiba
TLC-134
23482229

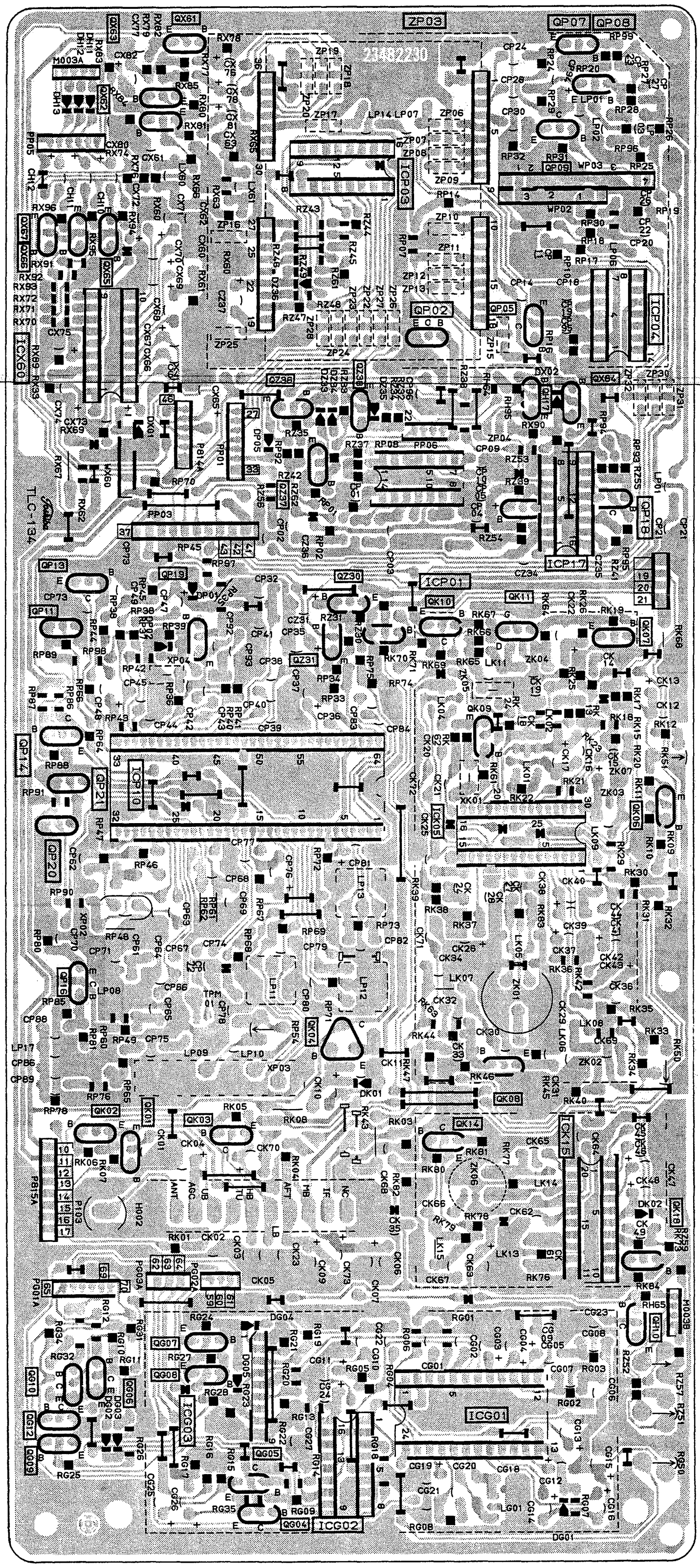
IR-AMP BOARD PW9200-7

BOTTOM (FOIL) SIDE


23482229
K901
TLC-134
Toshiba
PR01

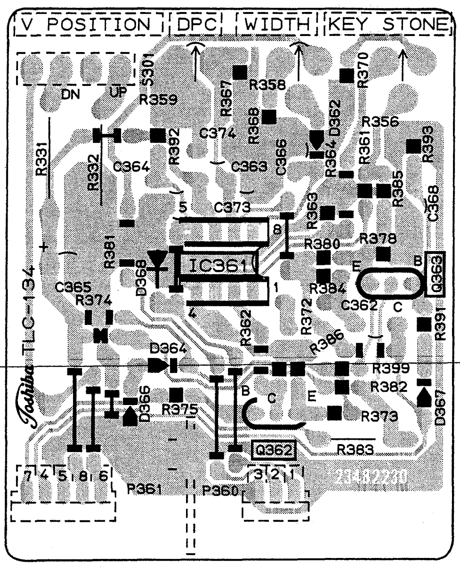
PIP BOARD PW9201-1

BOTTOM (FOIL) SIDE



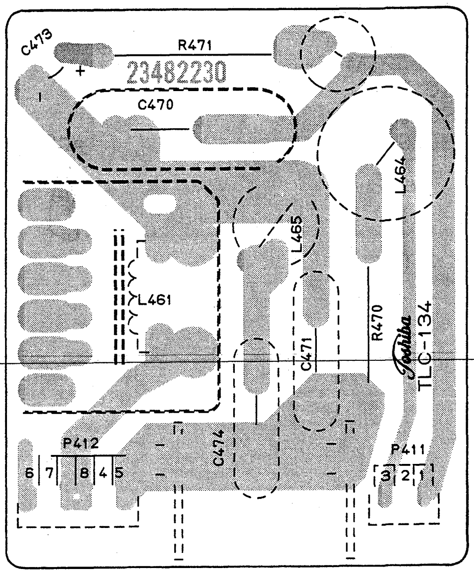
DPC-2 BOARD PW9201-2

BOTTOM (FOIL) SIDE


V POSITION
DPC
WIDTH
KEY STONE
DN
UP
S301
R359
R367
R358
R370
R368
D362
R356
R331
R332
C364
R392
C374
C363
C366
R364
R361
R393
R385
C368
5
C373
R363
8
R380
R378
R381
D368
IC361
E
B
Q363
C365
R374
1
R384
C362
C
4
R372
R362
R386
R391
D364
R399
R382
D366
R375
B
C
E
R373
D367
Q362
R383
7
4
5
8
6
P361
P360
3
2
1
23482230
Toshiba TLC-134

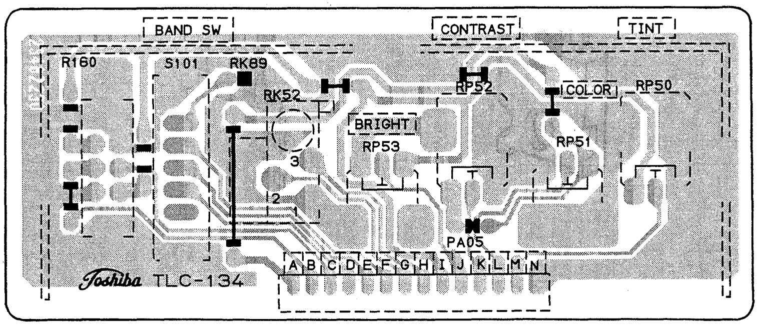
DPC-1 BOARD PW9201-3

BOTTOM (FOIL) SIDE


C473
+
R471
23482230
C470
L464
L465
L461
C471
R470
Toshiba TLC-134
P412
6
7
8
4
5
C474
P411
3
2
1

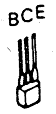
CONTROL BOARD PW9201-4

BOTTOM (FOIL) SIDE

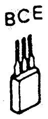

BAND SW
CONTRAST
TINT
R160
S101
RK89
RK52
RP52
COLOR
RP50
BRIGHT
RP53
RP51
3
2
PA05
A
B
C
D
E
F
G
H
I
J
K
L
M
N
Toshiba TLC-134

TERMINAL VIEW OF TRANSISTORS

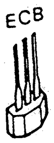
① 2SA1015
2SC388ATM
2SC1815
2SA562TM
2SC1959
2SC1627
2SC2878



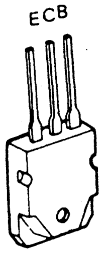
② 2SC2120
2SC2230
2SC2655



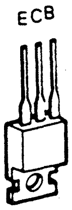
③ RN1203
RN1204
RN1206



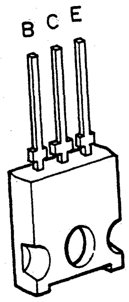
④ 2SA1265N



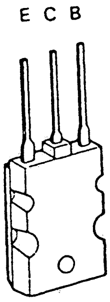
⑤ 2SD553
2SC1569
2SC2383
2SC3148
2SA1012



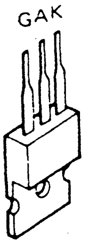
⑥ 2SC3619



⑦ 2SD1428



⑧ SF5J42



(SCR)

SCHEMATIC DIAGRAM MODEL 309P8F (1/4)

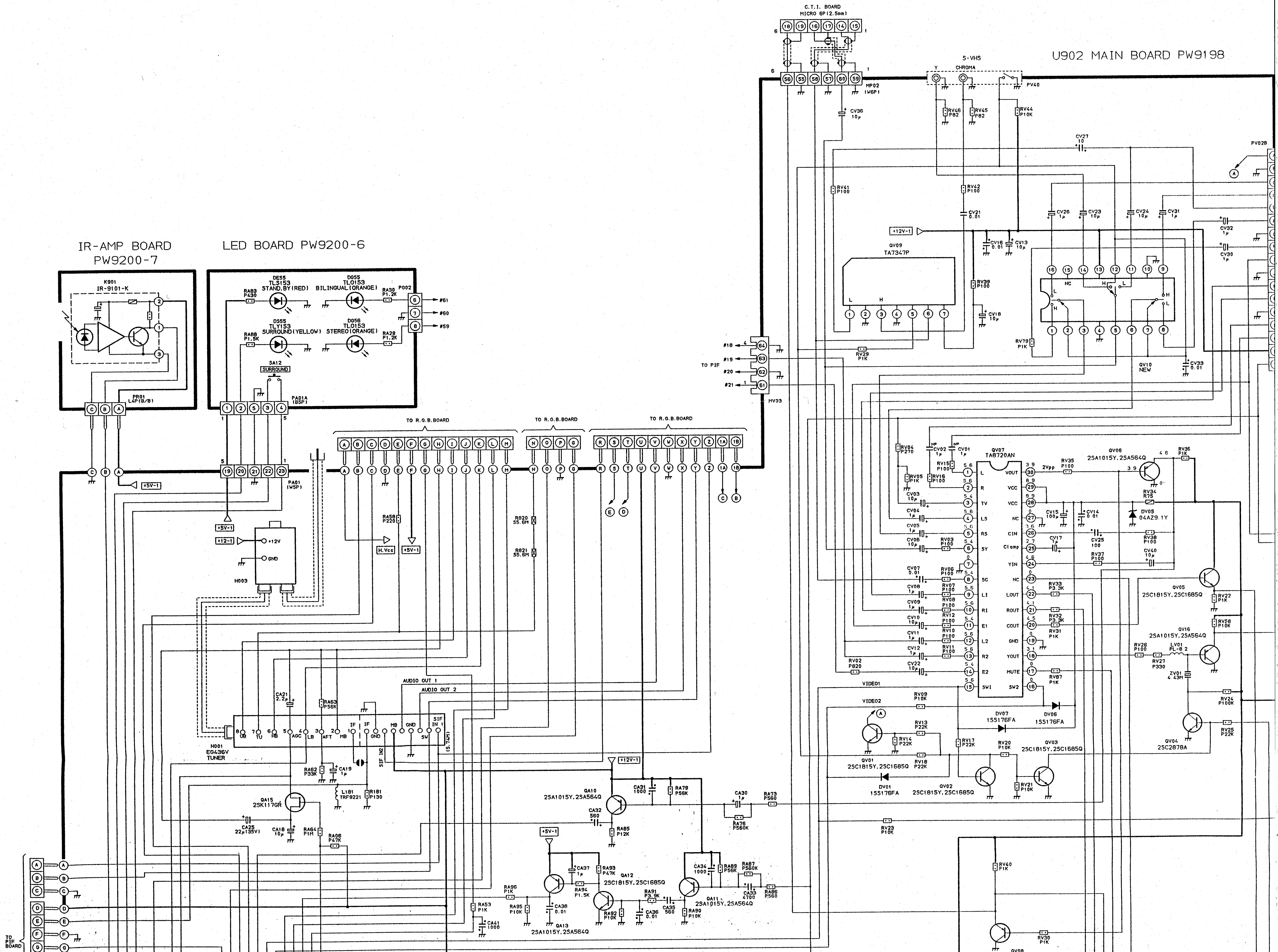
NOTE: The parts identified by the international hazard symbols are critical for safety. Replace only with part number specified.

OBSERVATION OF VOLTAGES AND WAVEFORMS

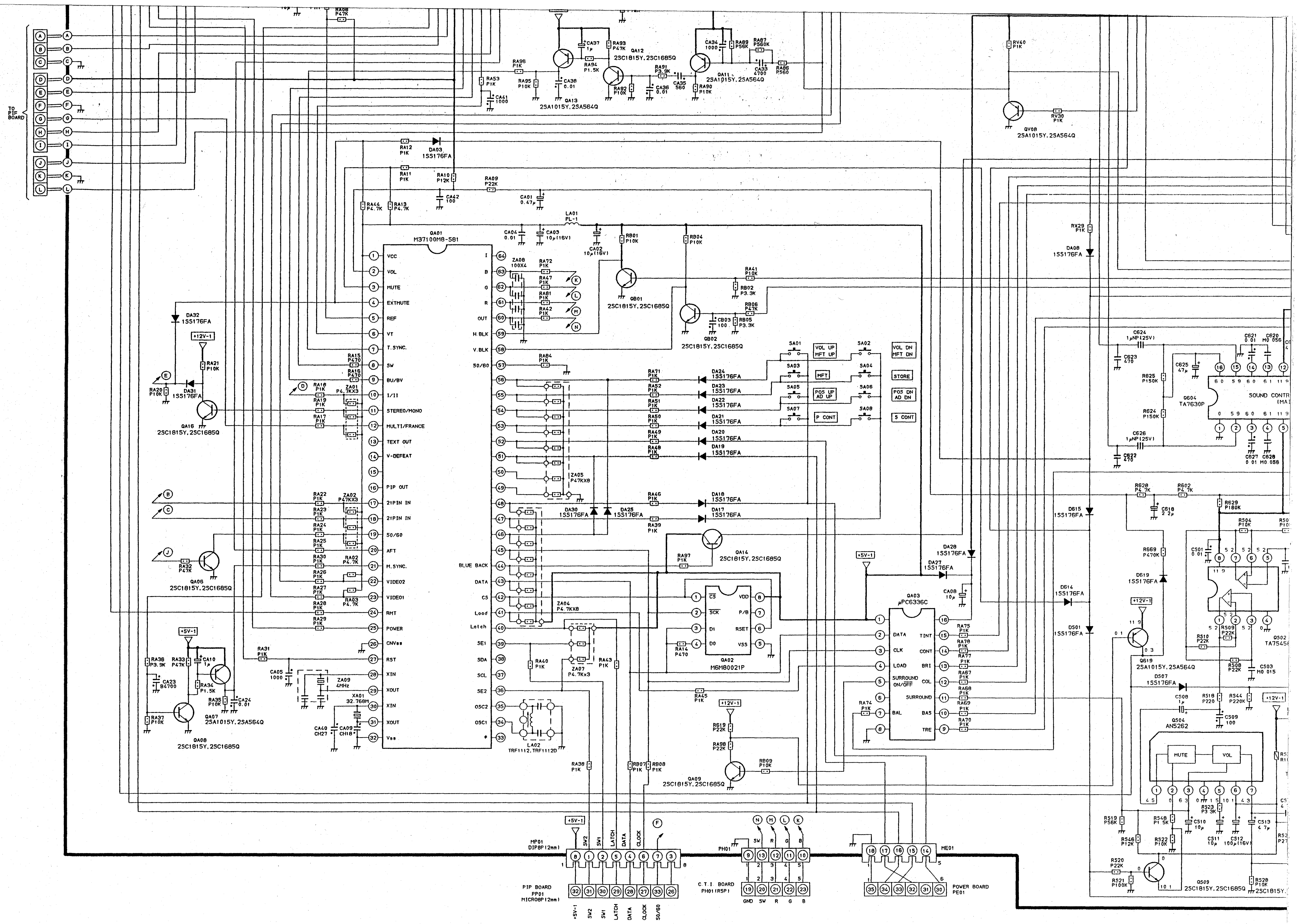
1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal.
2. Voltages reading may vary ±20%.
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe
5. Check FINE TUNING, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position.
6. Waveforms are taken using a standard colour bar signal.

NOTES:

1. D.C. resistance value of a principal transf
gram. These are measured for separated fr
2. The circuits are subject to change without
3. ⊖ : Solder links.



IR-AMP BOARD PW9200-7
K901 IR-9101-K
PR01 L4P(B/B)
LED BOARD PW9200-6
DE55 TLS153 STAND.BY(RED)
D055 TLO153 BILINGUAL(ORANGE)
D555 TLY153 SURROUND(YELLOW)
D056 TLO153 STEREO(ORANGE)
SA12 SURROUND
PA01A (BSP)
PA01 (W5P)
P002
C.T.I. BOARD MICRO 6P(2.5mm)
HP02 (W6P)
S-VHS
CHROMA
PV40
U902 MAIN BOARD PW9198
QV09 TA7347P
QV07 TA8720AN
QV10 NEW
QV08 2SA1015Y,2SA564Q
QV05 2SC1815Y,2SC1685Q
QV16 2SA1015Y,2SA564Q
QV04 2SC2878A
QV01 2SC1815Y,2SC1685Q
QV02 2SC1815Y,2SC1685Q
QV03 2SC1815Y,2SC1685Q
DV05 04AZ9.1Y
DV06 1SS176FA
DV07 1SS176FA
DV01 1SS176FA
ZV01 4.43M
LV01 PL-8 2
TO R.G.B.BOARD
TO R.G.B.BOARD
TO R.G.B.BOARD
TO PIF
HV33
H003
H001 E0436V TUNER
AUDIO OUT 1
AUDIO OUT 2
QA15 2SK117GR
L101 TRF9221
QA10 2SA1015Y,2SA564Q
QA12 2SC1815Y,2SC1685Q
QA11 2SA1015Y,2SA564Q
QA13 2SA1015Y,2SA564Q
VIDEO1
VIDEO2
TO PIP BOARD
+5V-1
+12V-1
H.Vcc


TO PIF BOARD
QA01
M37100M8-581
VCC
VOL
MUTE
EXTMUTE
REF
VT
T.SYNC.
SW
BU/BV
I/II
STEREO/MONO
MULTI/FRANCE
TEXT OUT
V-DEFEAT
PIP OUT
21PIN IN
21PIN IN
50/60
AFT
H.SYNC.
VIDEO2
VIDEO1
RMT
POWER
CNVss
RST
XIN
XOUT
XIN
XOUT
Vss
H.BLK
V.BLK
BLUE BACK
DATA
CS
Load
Latch
SE1
SDA
SCL
SE2
OSC2
OSC1
QA02
M6M80021P
QA03
μPC6336C
DATA
CLK
LOAD
SURROUND ON/OFF
BAL
TINT
CONT
BRI
COL
SURROUND
BAS
TRE
QA12
2SC1815Y,2SC1685Q
QA11
2SA1015Y,2SA564Q
QA13
2SA1015Y,2SA564Q
QV08
2SA1015Y,2SA564Q
QB01
2SC1815Y,2SC1685Q
QB02
2SC1815Y,2SC1685Q
QA16
2SC1815Y,2SC1685Q
QA06
2SC1815Y,2SC1685Q
QA07
2SA1015Y,2SA564Q
QA08
2SC1815Y,2SC1685Q
QA14
2SC1815Y,2SC1685Q
QA09
2SC1815Y,2SC1685Q
DA03
1SS176FA
DA32
1SS176FA
DA31
1SS176FA
DA30
1SS176FA
DA25
1SS176FA
DA24
1SS176FA
DA23
1SS176FA
DA22
1SS176FA
DA21
1SS176FA
DA20
1SS176FA
DA19
1SS176FA
DA18
1SS176FA
DA17
1SS176FA
DA28
1SS176FA
DA27
1SS176FA
DA08
1SS176FA
D615
1SS176FA
D614
1SS176FA
D501
1SS176FA
D619
1SS176FA
D507
1SS176FA
VOL UP
MFT UP
VOL DN
MFT DN
MFT
STORE
POS UP
AD UP
POS DN
AD DN
P CONT
S CONT
SA01
SA02
SA03
SA04
SA05
SA06
SA07
SA08
ZA01
ZA02
ZA03
ZA04
ZA05
ZA07
ZA08
ZA09
4MHz
XA01
32.768M
LA01
PL-1
LA02
TRF1112,TRF1112D
+5V-1
+12V-1
MP01
DIP8P12mm1
5V2
5V1
LATCH
DATA
CLOCK
PIP BOARD
PP01
MICRO8P12mm1
+5V-1
5V2
5V1
LATCH
DATA
CLOCK
50/60
PH01
C.T.I BOARD
PH01R5P1
GND
SW
R
G
B
ME01
POWER BOARD
PE01
Q604
TA7630P
SOUND CONTR
Q502
TA7545
Q504
AN5262
MUTE
VOL
Q619
2SA1015Y,2SA564Q
Q509
2SC1815Y,2SC1685Q
2SC1815Y

sistance value of a principal transformer is shown in this schematic dia-
‾hese are measured for separated from the circuit.
:uits are subject to change without notice.
older links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

RESISTOR

Table 1

Type	Mark
Carbon Composition	S
Oxide Metal Film	R
Insulated Carbon Film	P
Wire Wound	W
Cement	No Mark
Variable Resistor	-⧄-
Positive Thermistor	-⧄-
Negative Thermistor	-⊠-
Fusible Resistor	FR

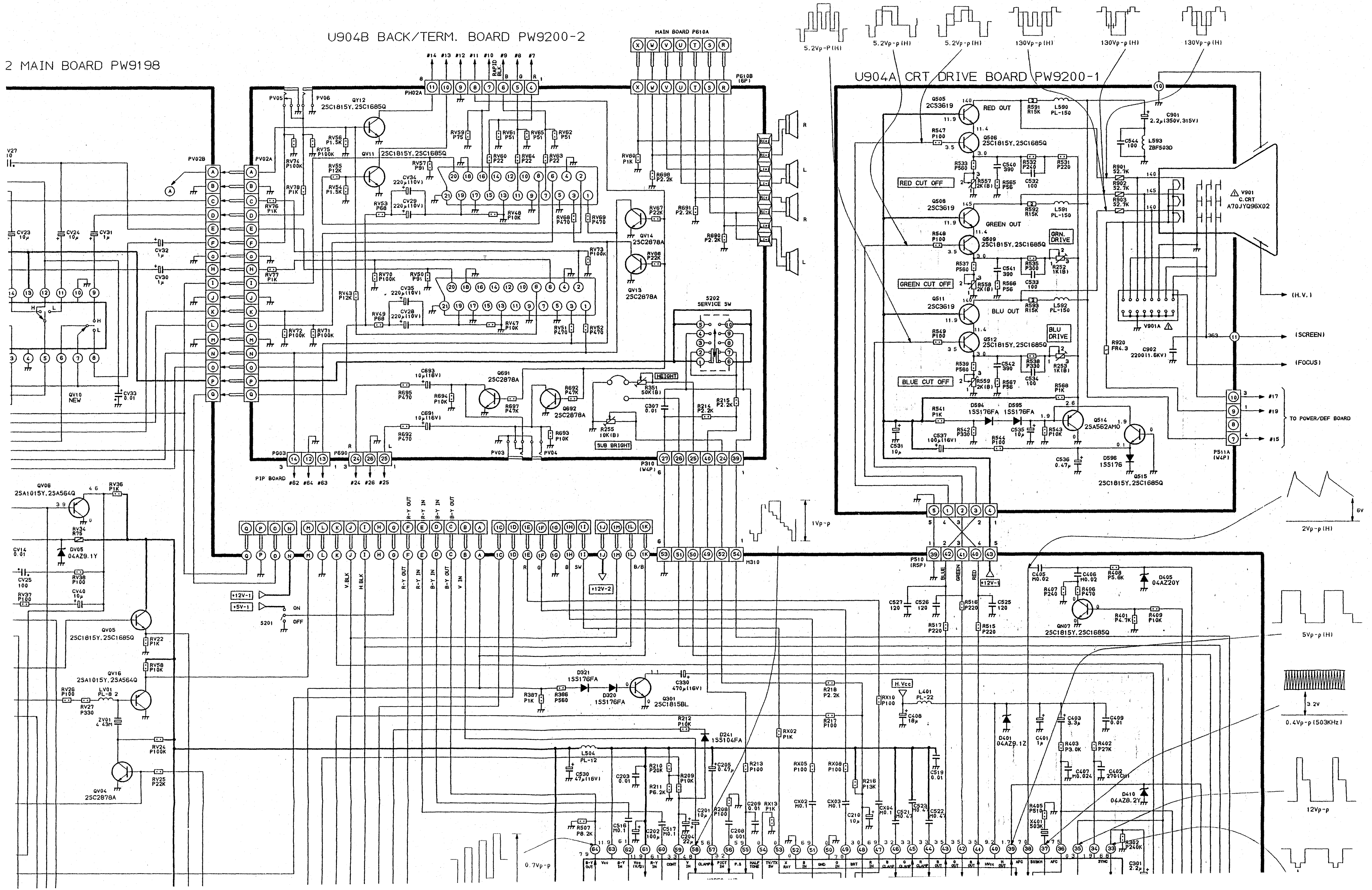
Table 2

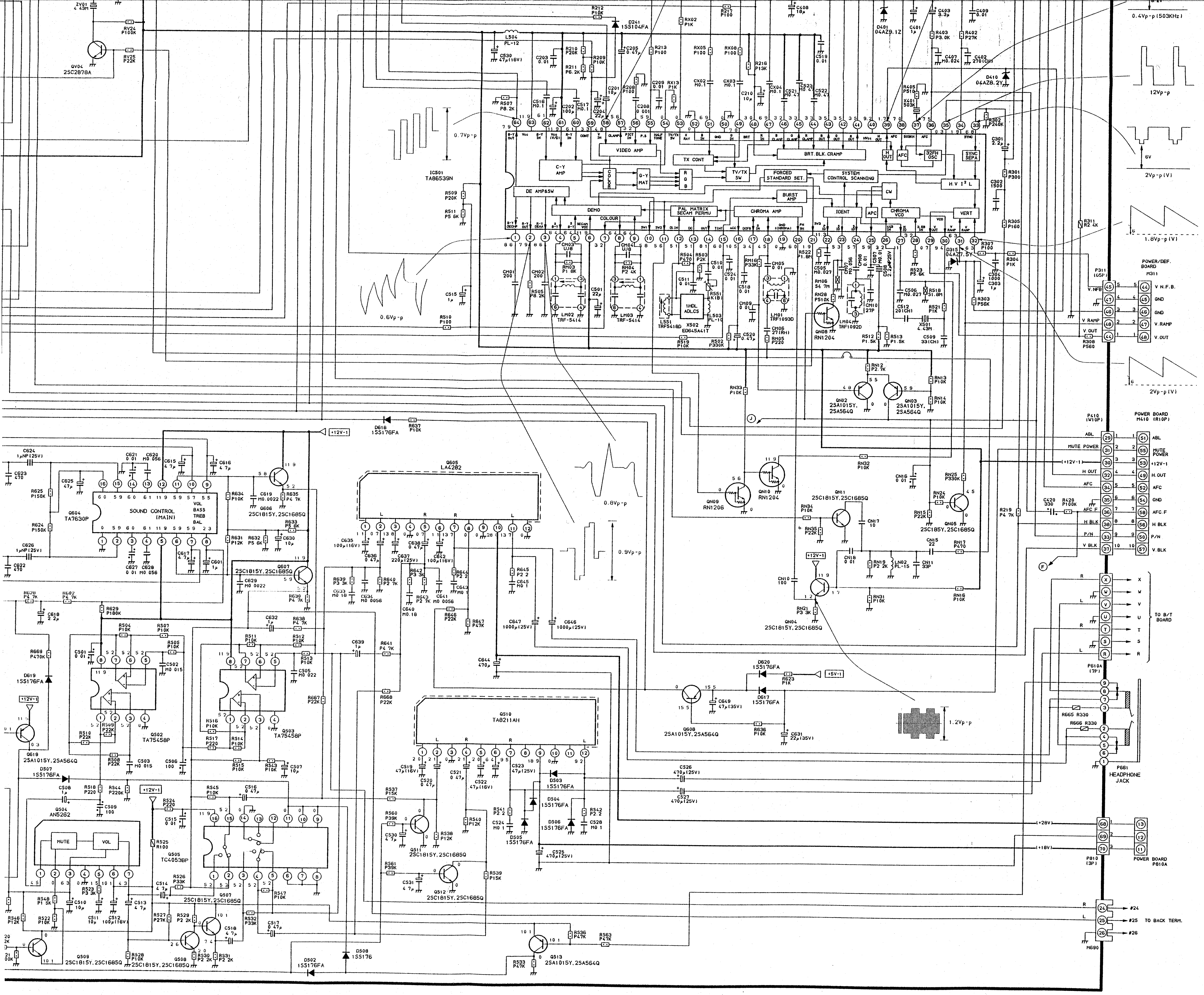
Watt	Mark	Watt	Mark
1/6 W	-[··]-	3 W	-[3]-
1/8 W	-[·]-	5 W	-[5]-
1/4 W	-⊠-	10 W	-[10]-
1/2 W	-⧄-	15 W	-[15]-
1 W	-[1]-	20 W	-[20]-
2 W	-[2]-	25 W	-[25]-

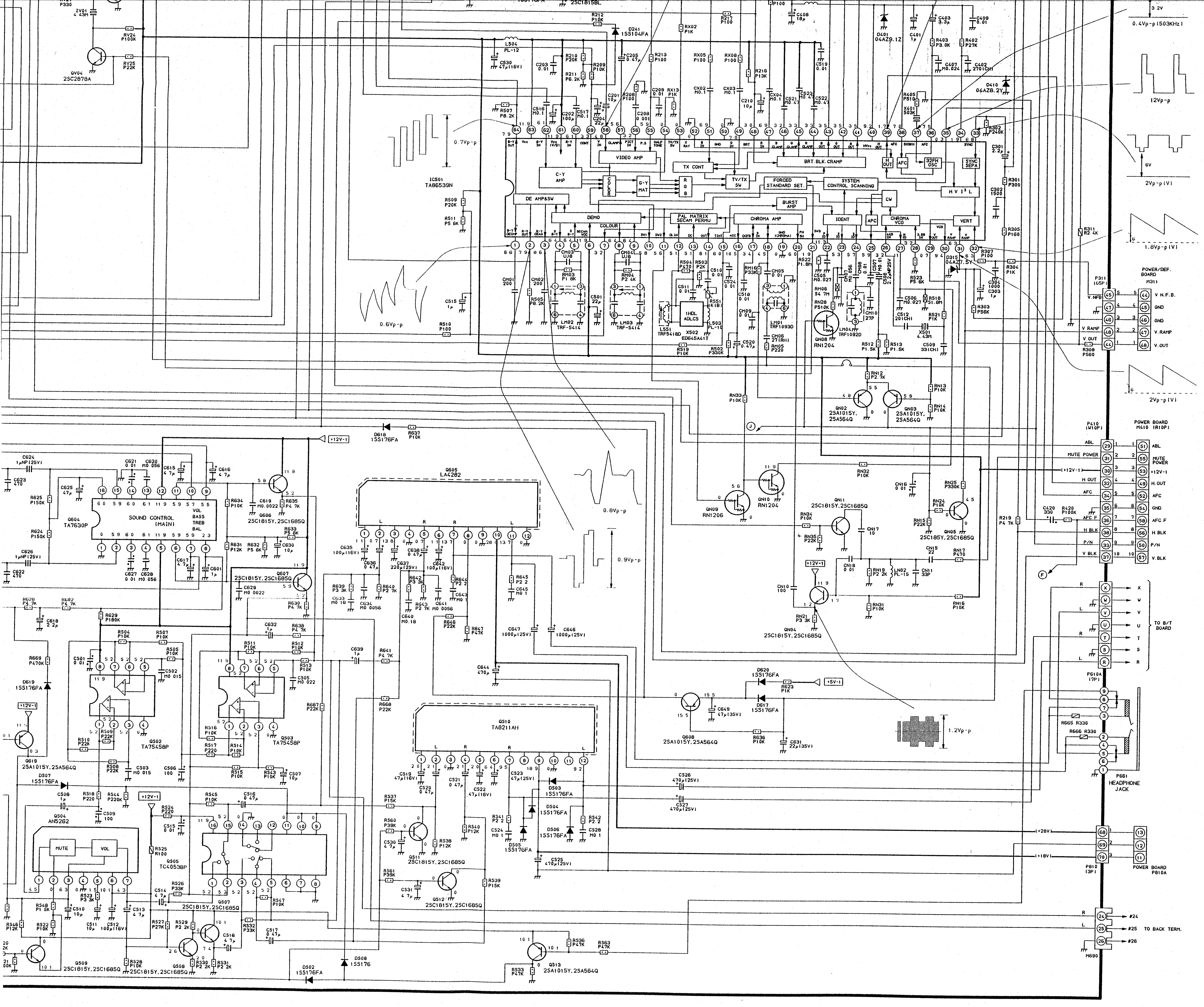
CAPACITOR

Table 3

Type	Mark
Ceramic Disc 50V Only	-‖-
Electrolitic	+-‖- +-‖-
Electrolitic Non-Polar	-‖- -‖‖-
Variable Capacitor	-‖-
Other	-‖-


U904B BACK/TERM. BOARD PW9200-2
2 MAIN BOARD PW9198
U904A CRT DRIVE BOARD PW9200-1
MAIN BOARD P610A
5.2Vp-P(H)
5.2Vp-p(H)
5.2Vp-p(H)
130Vp-p(H)
130Vp-p(H)
130Vp-p(H)
RED OUT
GREEN OUT
BLU OUT
RED CUT OFF
GREEN CUT OFF
BLUE CUT OFF
GRN. DRIVE
BLU DRIVE
V901 C.CRT A70JYQ96X02
(H.V.)
(SCREEN)
(FOCUS)
TO POWER/DEF BOARD
S202 SERVICE SW
HEIGHT
SUB BRIGHT
PIP BOARD
1Vp-p
2Vp-p(H)
5Vp-p(H)
0.4Vp-p(503KHz)
12Vp-p
0.7Vp-p
+12V-1
+5V-1
+12V-2
S201
ON
OFF
H.Vcc
6V
3.2V


IC501
TA8653SN
VIDEO AMP
TX CONT
BRT.BLK.CRAMP
C-Y AMP
G-Y MAT
TV/TX SW
FORCED STANDARD SET.
SYSTEM CONTROL SCANNING
H OUT
AFC
32FH OSC
SYNC SEPA
H V I²L
DE AMP&SW
DEMO
COLOUR
PAL MATRIX SECAM PERMU
CHROMA AMP
BURST AMP
CW
IDENT
APC
CHROMA VCO
VERT
QV04
2SC2878A
0.7Vp-p
0.6Vp-p
0.4Vp-p(503KHz)
12Vp-p
6V
2Vp-p(V)
1.8Vp-p(V)
2Vp-p(V)
0.8Vp-p
0.9Vp-p
1.2Vp-p
LM02 TRF-5414
LM03 TRF-5414
X502 ED645A41T
LM01 TRF1093D
LM04 TRF1092D
QN08 RN1204
QN02 2SA1015Y, 2SA564Q
QN03 2SA1015Y, 2SA564Q
QN09 RN1206
QN10 RN1204
QN11 2SC1815Y, 2SC1685Q
QN05 2SC185Y, 2SC1685Q
QN04 2SC1815Y, 2SC1685Q
P311 (G5P)
POWER/DEF. BOARD M311
V.NFB
GND
V RAMP
V OUT
V.N.F.B.
V.RAMP
V.OUT
P410 (W10P)
POWER BOARD M410 (R10P)
ABL
MUTE POWER
(+12V-1)
H OUT
AFC
GND
AFC F
H BLK
P/N
V BLK
H.OUT
AFC.F
H.BLK
V.BLK
+12V-1
Q605 LA4282
Q604 TA7630P
SOUND CONTROL (MAIN)
VOL BASS TREB BAL
Q606 2SC1815Y, 2SC1685Q
Q607 2SC1815Y, 2SC1685Q
Q502 TA7545BP
Q503 TA7545BP
Q619 2SA1015Y, 2SA564Q
Q504 AN5262
MUTE
VOL
Q505 TC4053BP
Q507 2SC1815Y, 2SC1685Q
Q508 2SC1815Y, 2SC1685Q
Q509 2SC1815Y, 2SC1685Q
Q510 TA8211AH
Q511 2SC1815Y, 2SC1685Q
Q512 2SC1815Y, 2SC1685Q
Q513 2SA1015Y, 2SA564Q
Q608 2SA1015Y, 2SA564Q
D618 1SS176FA
D619 1SS176FA
D620 1SS176FA
D617 1SS176FA
D507 1SS176FA
D502 1SS176FA
D508 1SS176
D503 1SS176FA
D504 1SS176FA
D505 1SS176FA
D506 1SS176FA
D241 1SS104FA
D401 04AZ9.1Z
D410 04AZ8.2Y
D315 04AZ7.5Y
+5V-1
TO B/T BOARD
X W V U T S R
P610A (7P)
P661 HEADPHONE JACK
R665 R330
R666 R330
(+28V)
(+18V)
P810 (3P)
POWER BOARD P810A
TO BACK TERM.
#24
#25
#26
M690


IC501
TA8653N
VIDEO AMP
C-Y AMP
G-Y MAT
TX CONT
BRT.BLK.CRAMP
TV/TX SW
FORCED STANDARD SET
SYSTEM CONTROL SCANNING
DE AMP&SW
DEMO
COLOUR
PAL MATRIX SECAM PERMU
CHROMA AMP
BURST AMP
IDENT
APC
CHROMA VCO
CW
VERT
H V I² L
AFC
32FH OSC
SYNC SEPA
H OUT
0.7Vp-p
0.6Vp-p
0.8Vp-p
0.9Vp-p
1.2Vp-p
3.2V
0.4Vp-p(503KHz)
12Vp-p
6V
2Vp-p(V)
1.8Vp-p(V)
2Vp-p(V)
POWER/DEF. BOARD
M311
P311 (05P)
V.N.F.B.
GND
V.RAMP
V.OUT
P410 (W10P)
POWER BOARD M410 (R10P)
ABL
MUTE POWER
+12V-1
H.OUT
AFC
AFC F
H.BLK
P/N
V.BLK
TO B/T BOARD
P610A (7P)
P661 HEADPHONE JACK
R665 R330
R666 R330
POWER BOARD P810A
P810 (3P)
+28V
+18V
TO BACK TERM.
M690
#24
#25
#26
Q604 TA7630P
SOUND CONTROL (MAIN)
VOL BASS TREB BAL
Q605 LA4282
Q510 TA8211AH
Q502 TA7545BP
Q503 TA7545BP
Q504 AN5262
MUTE
VOL
Q505 TC4053BP
Q606 2SC1815Y,2SC1685Q
Q607 2SC1815Y,2SC1685Q
Q608 2SA1015Y,2SA564Q
Q619 2SA1015Y,2SA564Q
Q511 2SC1815Y,2SC1685Q
Q512 2SC1815Y,2SC1685Q
Q513 2SA1015Y,2SA564Q
Q507 2SC1815Y,2SC1685Q
Q508 2SC1815Y,2SC1685Q
Q509 2SC1815Y,2SC1685Q
QN01 2SC1815Y,2SC1685Q
QN02 2SA1015Y,2SA564Q
QN03 2SA1015Y,2SA564Q
QN04 2SC1815Y,2SC1685Q
QN05 2SC1815Y,2SC1685Q
QN08 RN1204
QN09 RN1206
QN10 RN1204
QV04 2SC2878A
D241 1SS104FA
D401 04AZ9.1Z
D410 04AZ8.2Y
D315 04AZ7.5Y
D618 1SS176FA
D619 1SS176FA
D620 1SS176FA
D617 1SS176FA
D507 1SS176FA
D503 1SS176FA
D504 1SS176FA
D505 1SS176FA
D506 1SS176FA
D502 1SS176FA
D508 1SS176
L504 PL-12
LM02 TRF-5414
LM03 TRF-5414
LM01 TRF1093D
LM04 TRF1092D
L551 TRF5418D
X502 ED645A41T
1HDL ADLCS
X501 4.43M
CH03 UJ8
CH04 UJ8
+12V-1
+5V-1

SCHEMATIC DIAGRAM MODEL 309P8F (2/4)

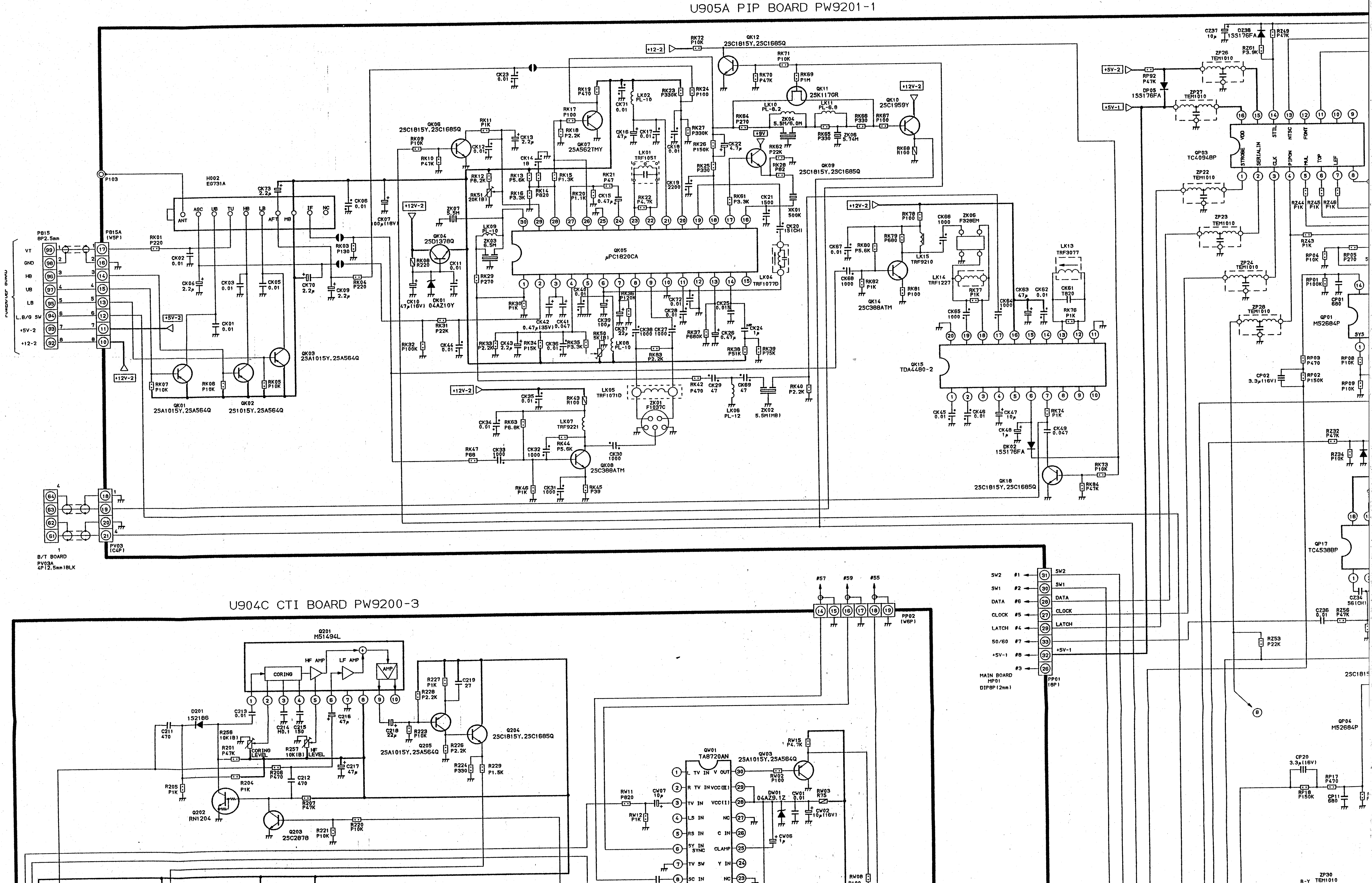
NOTE: The parts identified by the international hazard symbols are critical for safety. Replace only with part number specified.

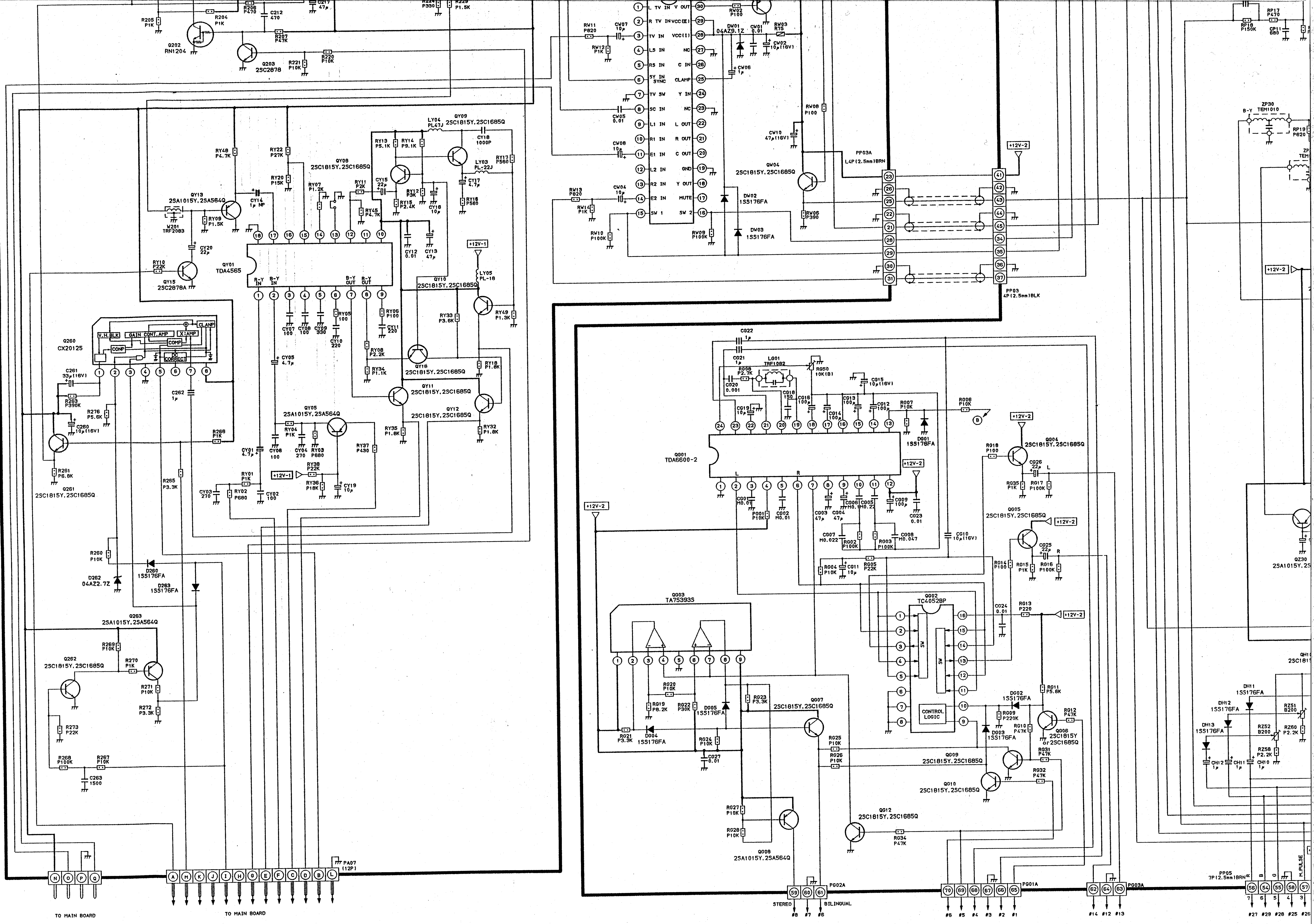
OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal.
2. Voltages reading may vary ±20%.
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe
5. Check FINE TUNING, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position.
6. Waveforms are taken using a standard colour bar signal.

NOTES:

1. D.C. resistance value of a principal trans gram. These are measured for separated f
2. The circuits are subject to change withou
3. ⬬ : Solder links.


U905A PIP BOARD PW9201-1
U904C CTI BOARD PW9200-3
H002 E0731A
QK05 μPC1820CA
QK15 TDA4480-2
QK07 2SA562TMY
QK04 2SD1378Q
QK06 2SC1815Y, 2SC1685Q
QK12 2SC1815Y, 2SC1685Q
QK09 2SC1815Y, 2SC1685Q
QK10 2SC1959Y
QK11 2SK117GR
QK14 2SC388ATM
QK08 2SC388ATM
QK18 2SC1815Y, 2SC1685Q
QK01 2SA1015Y, 2SA564Q
QK02 2SA1015Y, 2SA564Q
QK03 2SA1015Y, 2SA564Q
QP03 TC4094BP
QP01 M52684P
QP17 TC4538BP
QP04 M52684P
Q201 M51494L
Q202 RN1204
Q203 2SC2878
Q204 2SC1815Y, 2SC1685Q
Q205 2SA1015Y, 2SA564Q
QV01 TA8720AN
QV03 2SA1015Y, 2SA564Q
CORING
HF AMP
LF AMP
AMP
CORING LEVEL
HF LEVEL
P815 8P2.5mm
P815A (W5P)
PV03 (C4P)
B/T BOARD PV03A 4P(2.5mm)BLK
PP02 (W6P)
PP01 (8P)
MAIN BOARD MP01 DIP8P(2mm)
SW2
SW1
DATA
CLOCK
LATCH
50/60
+5V-1
+12-2
+12V-2
+5V-2
+9V
VT
GND
HB
UB
LB
L.B/G SW



Q202 RN1204
Q203 2SC2878
QY01 TDA4565
QY13 2SA1015Y,2SA564Q
QY15 2SC2878A
QY08 2SC1815Y,2SC1685Q
QY09 2SC1815Y,2SC1685Q
QY10 2SC1815Y,2SC1685Q
QY16 2SC1815Y,2SC1685Q
QY11 2SC1815Y,2SC1685Q
QY12 2SC1815Y,2SC1685Q
QY05 2SA1015Y,2SA564Q
W201 TRF2083
Q260 CX20125
V.H.BLK
GAIN CONT.AMP
X'AMP
CLAMP
COMP
DC CORRECT
Q261 2SC1815Y,2SC1685Q
D262 04AZ2.7Z
D260 1SS176FA
D263 1SS176FA
Q263 2SA1015Y,2SA564Q
Q262 2SC1815Y,2SC1685Q
+12V-1
R-Y IN
B-Y IN
B-Y OUT
R-Y OUT
TO MAIN BOARD
TO MAIN BOARD
PA07 (12P)
L TV IN V OUT
R TV IN VCC(2)
TV IN VCC(1)
LS IN
RS IN
SY IN SYNC
TV SW
SC IN
L1 IN
R1 IN
E1 IN
L2 IN
R2 IN
E2 IN
SW 1
SW 2
MUTE
Y OUT
GND
C OUT
R OUT
L OUT
Y IN
CLAMP
C IN
NC
DW01 04AZ9.1Z
DW02 1SS176FA
DW03 1SS176FA
QW04 2SC1815Y,2SC1685Q
PP03A L4P(2.5mm)BRN
PP03 4P(2.5mm)BLK
+12V-2
Q001 TDA6600-2
L001 TRF1082
D001 1SS176FA
Q004 2SC1815Y,2SC1685Q
Q005 2SC1815Y,2SC1685Q
Q003 TA7539S
Q002 TC4052BP
CONTROL LOGIC
SW
D002 1SS176FA
D003 1SS176FA
D004 1SS176FA
D005 1SS176FA
Q006 2SC1815Y or 2SC1685Q
Q007 2SC1815Y,2SC1685Q
Q008 2SA1015Y,2SA564Q
Q009 2SC1815Y,2SC1685Q
Q010 2SC1815Y,2SC1685Q
Q012 2SC1815Y,2SC1685Q
PG02A
STEREO
BILINGUAL
PG01A
PG03A
PP05 7P(2.5mm)BRN
B-Y
ZP30 TEM1010
QZ30 2SA1015Y
DH11 1SS176FA
DH12 1SS176FA
DH13 1SS176FA
H.PULSE

3

stance value of a principal transformer is shown in this schematic dia-
ese are measured for separated from the circuit.
its are subject to change without notice.
der links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

RESISTOR

Table 1

Type	Mark
Carbon Composition	S
Oxide Metal Film	R
Insulated Carbon Film	P
Wire Wound	W
Cement	No Mark
Variable Resistor	-[/]-
Positive Thermistor	-[/]-
Negative Thermistor	-[⊠]-
Fusible Resistor	FR

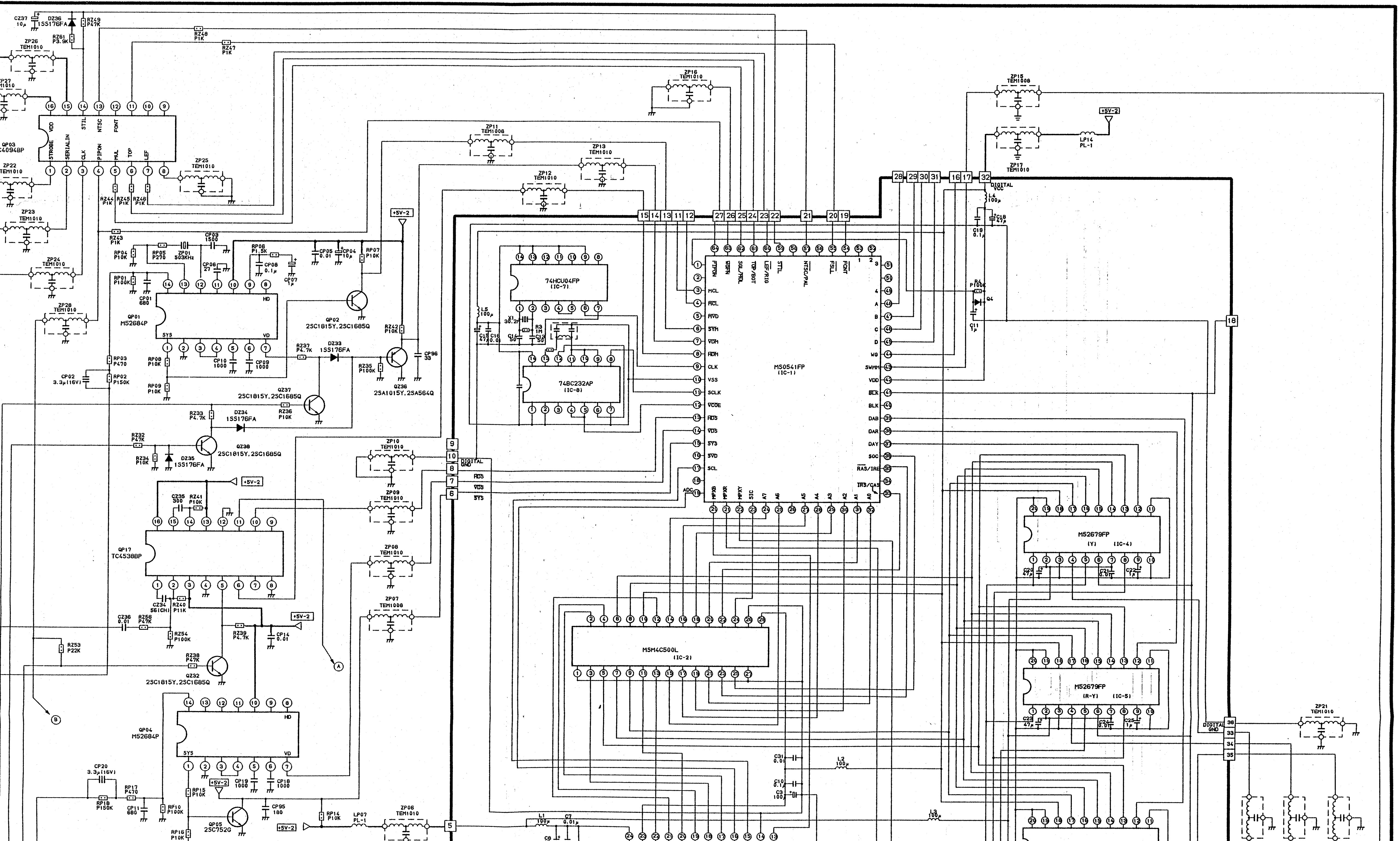
Table 2

Watt	Mark	Watt	Mark
1/6 W	-[··]-	3 W	-[3]-
1/8 W	-[·]-	5 W	-[5]-
1/4 W	-[⊠]-	10 W	-[10]-
1/2 W	-[/]-	15 W	-[15]-
1 W	-[1]-	20 W	-[20]-
2 W	-[2]-	25 W	-[25]-

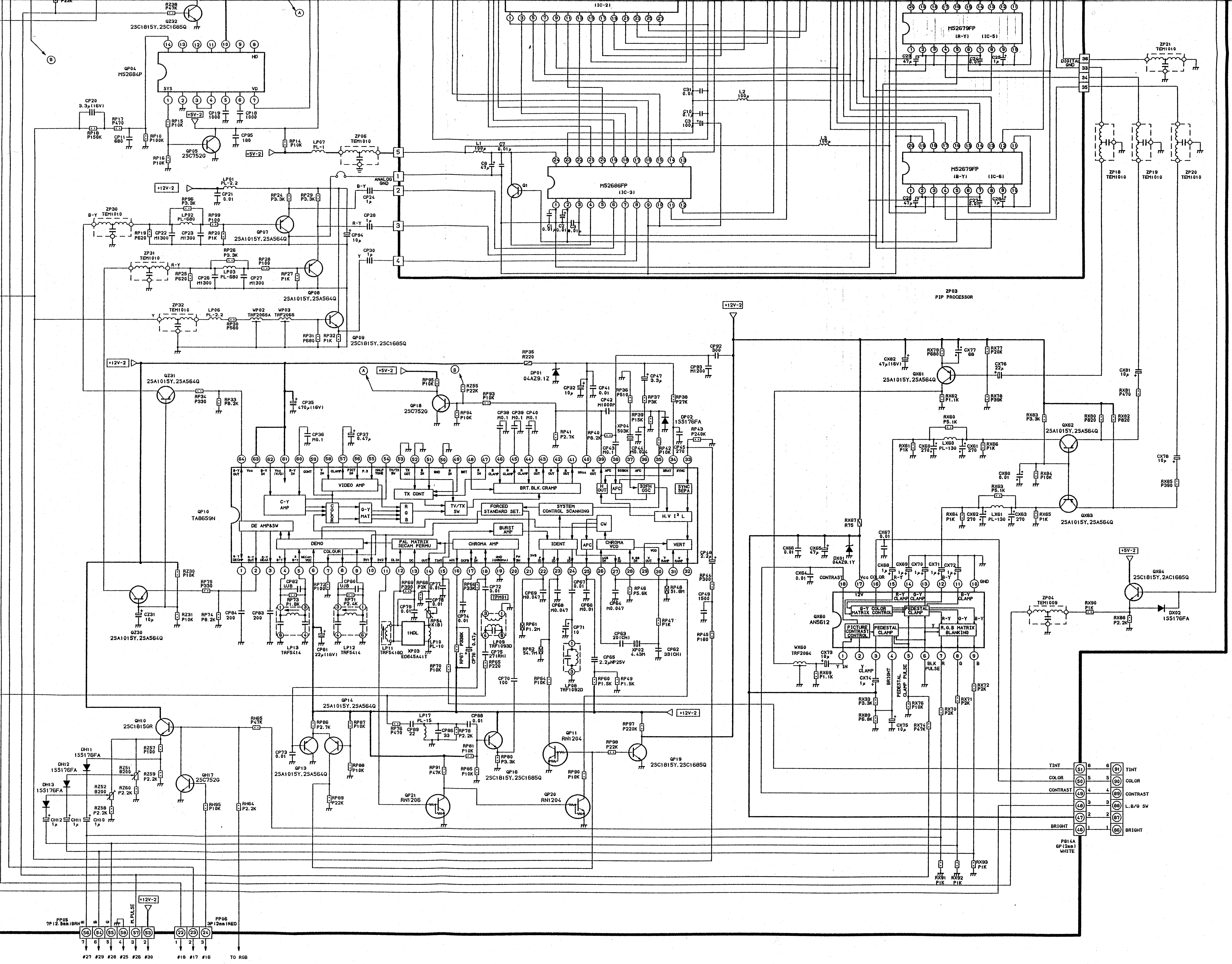
CAPACITOR

Table 3

Type	Mark
Ceramic Disc 50V Only	-‖-
Electrolitic	+-‖- +-‖-
Electrolitic Non-Polar	-‖- -‖‖-
Variable Capacitor	-‖-
Other	-‖-



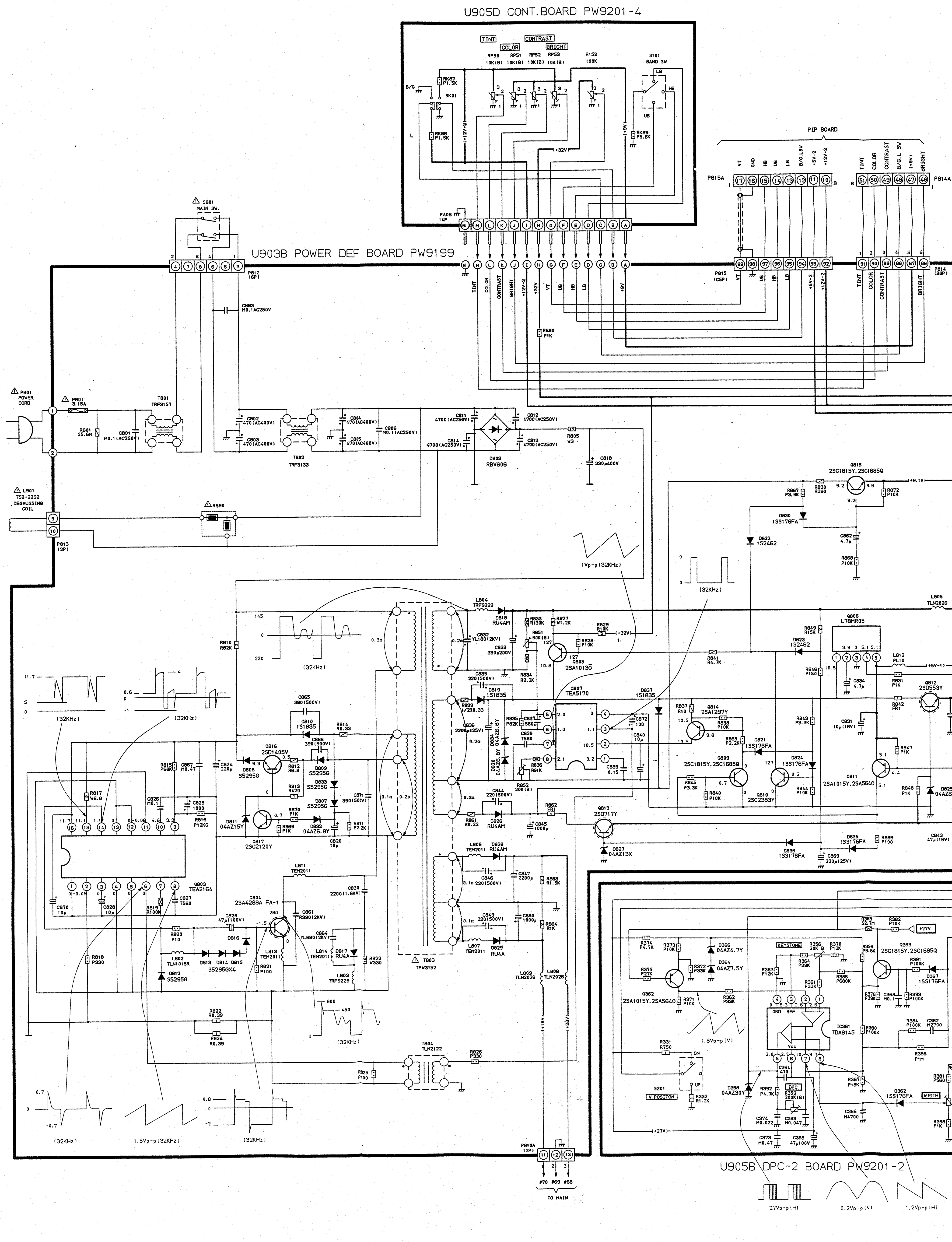
M50541FP (IC-1)
MSM4C500L (IC-2)
M52679FP (Y) (IC-4)
M52679FP (R-Y) (IC-5)
74HCU04FP (IC-7)
74BC232AP (IC-8)
QP01 M52684P
QP04 M52684P
QP17 TC4538BP
QP03 40948P
QP02 2SC1815Y, 2SC1685Q
QZ36 2SA1015Y, 2SA564Q
QZ37 2SC1815Y, 2SC1685Q
QZ38 2SC1815Y, 2SC1685Q
QZ32 2SC1815Y, 2SC1685Q
QP05 2SC752G
DZ36 1SS176FA
DZ33 1SS176FA
DZ34 1SS176FA
DZ35 1SS176FA
ZP01 503KHz
+5V-2
DIGITAL GND
RD3
VD3
SY3
STROBE
SERIALIN
CLK
PIPON
MUL
TOP
LEF
VDD
STIL
NTSC
FONT
HD
VD
SYS
Ⓐ
Ⓑ

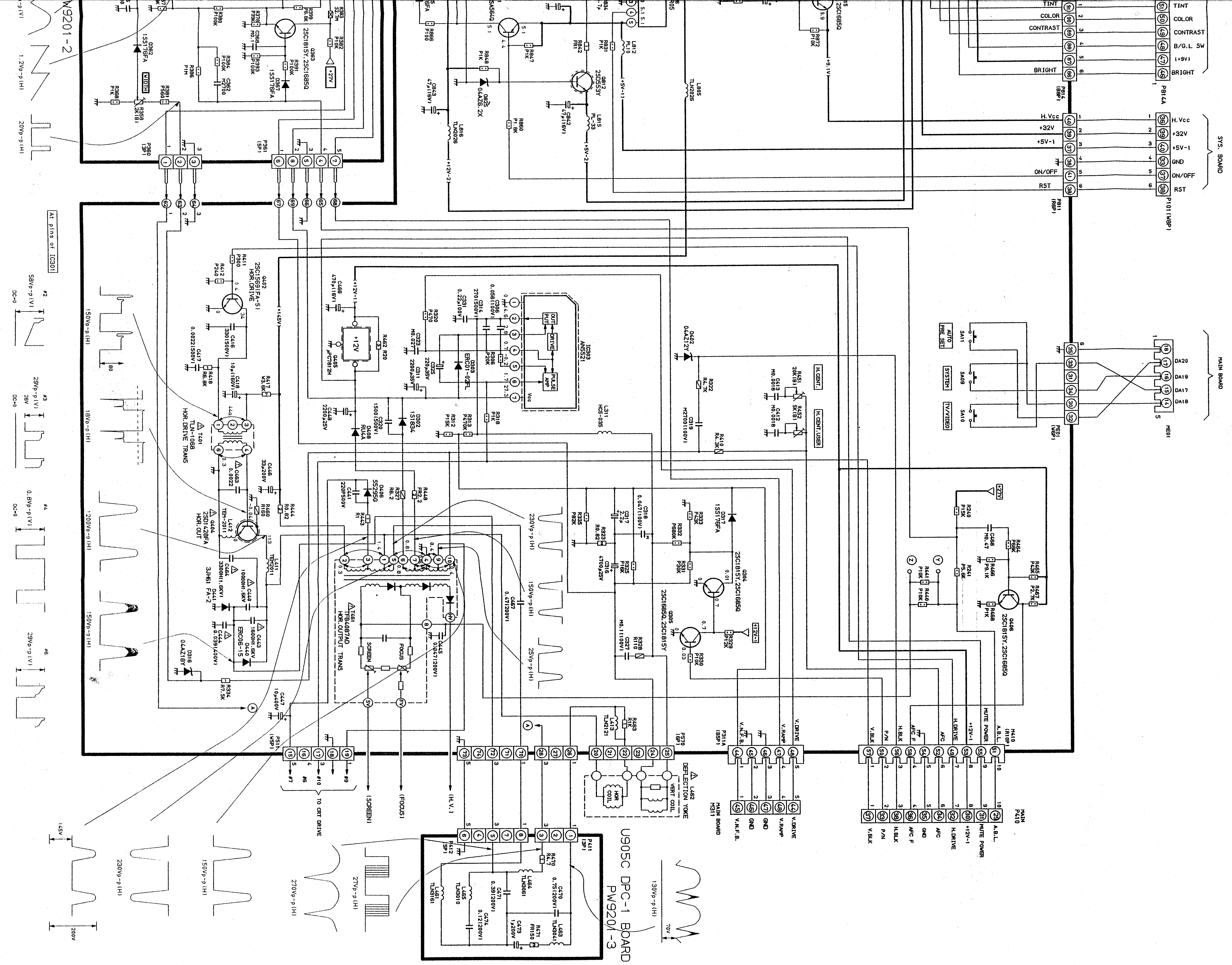

ZP03
PIP PROCESSOR
(IC-2)
M52679FP
(R-Y) (IC-5)
M52679FP
(B-Y) (IC-6)
M52686FP
(IC-3)
DIGITAL GND
ANALOG GND
ZP21 TEM1010
ZP18 TEM1010
ZP19 TEM1010
ZP20 TEM1010
QP04 M52684P
QP05 2SC752G
ZP06 TEM1010
QZ32 2SC1815Y,2SC1685Q
QP07 2SA1015Y,2SA564Q
QP08 2SA1015Y,2SA564Q
QP09 2SC1815Y,2SC1685Q
ZP30 TEM1010
ZP31 TEM1010
ZP32 TEM1010
B-Y
R-Y
Y
+12V-2
+5V-2
QZ31 2SA1015Y,2SA564Q
QZ30 2SA1015Y,2SA564Q
QP18 2SC752G
DP01 04AZ9.1Z
DP02 1SS176FA
QP10 TA8659N
VIDEO AMP
TX CONT
BRT.BLK.CRAMP
C-Y AMP
G-Y MAT
TV/TX SW
FORCED STANDARD SET.
SYSTEM CONTROL SCANNING
AFC
32FH OSC
SYNC SEPA
H OUT
H.V I2 L
DE AMP&SW
DEMO
COLOUR
PAL MATRIX SECAM PERMU
CHROMA AMP
BURST AMP
IDENT
APC
CW
CHROMA VCO
VERT
XP04 503K
XP03 ED645A41T
XP02 4.43M
LP13 TRF5414
LP12 TRF5414
LP11 TRF5418D
LP09 TRF1093D
LP08 TRF1092D
TPH01
QX61 2SA1015Y,2SA564Q
QX62 2SA1015Y,2SA564Q
QX63 2SA1015Y,2SA564Q
QX64 2SC1815Y,2AC1685Q
QX60 AN5612
DX01 04AZ9.1Y
DX02 1SS176FA
ZP04 TEM1009
WX60 TRF2064
G-Y COLOR MATRIX CONTROL
PEDESTAL CLAMP
PICTURE CONTRAST CONTROL
R.G.B MATRIX BLANKING
CONTRAST
Vcc
COLOR
GND
Y IN
CLAMP
BRIGHT
PEDESTAL CLAMP PULSE
BLK PULSE
QH10 2SC1815GR
QH17 2SC752G
DH11 1SS176FA
DH12 1SS176FA
DH13 1SS176FA
QP14 2SA1015Y,2SA564Q
QP13 2SA1015Y,2SA564Q
QP16 2SC1815Y,2SC1685Q
QP11 RN1204
QP19 2SC1815Y,2SC1685Q
QP21 RN1206
QP20 RN1204
TINT
COLOR
CONTRAST
L.B/G SW
BRIGHT
PB14A
6P(2mm)
WHITE
PP05
7P(2.5mm)BRN
PP06
3P(2mm)RED
H.PULSE
#27 #29 #28 #25 #26 #30
#18 #17 #16
TO RGB

4

SCHEMATIC DIAGRAM MODEL 309P8F (3/4)

NOTE: The parts identified by the international hazard symbols are critical for safety. Replace only with part number specified.


U905D CONT.BOARD PW9201-4
TINT
COLOR
CONTRAST
BRIGHT
S101 BAND SW
PIP BOARD
P815A
P814A
S801 MAIN SW.
U903B POWER DEF BOARD PW9199
P812 (6P)
P815 (CSP)
P801 POWER CORD
F801 3.15A
T801 TRF3157
T802 TRF3133
D803 RBV606
L901 TSB-2292 DEGAUSSING COIL
P813 (2P)
R890
IC801 TEA2164
Q807 TEA5170
Q806 L78MR05
T803 TPW3152
T804 TLN2122
P810A (3P)
TO MAIN
IC361 TDA8145
S301 V POSITON
KEYSTONE
DPC
WIDTH
U905B DPC-2 BOARD PW9201-2
27Vp-p(H)
0.2Vp-p(V)
1.2Vp-p(H)
1.5Vp-p(32KHz)
1Vp-p(32KHz)
1.8Vp-p(V)
(32KHz)


U905C DPC-1 BOARD
PW9201-3
W9201-2
At pins of IC301
L462
DEFLECTION YOKE
HOR COIL
VERT COIL
MAIN BOARD
M311
SYS. BOARD
MAIN BOARD
TINT
COLOR
CONTRAST
B/G.L SW
(+9V)
BRIGHT
H.Vcc
+32V
+5V-1
GND
ON/OFF
RST
P101 (WBP)
P814A
DA20
DA19
DA17
DA18
AUTO PRE SET
SYSTEM
TV/VIDEO
H.CENT.
H.CENT.USER
T461
FBT4087AD
HOR.OUTPUT TRANS
SCREEN
FOCUS
T401
TLN-1068
HOR.DRIVE TRANS
Q402
2SC1569(FA-5)
HOR.DRIVE
Q404
2SD1428FA
HOR.OUT
IC303
AN5521
Q405
μPC7812H
+12V
TO CRT DRIVE
(SCREEN)
(FOCUS)
(H.V.)
V.N.F.B.
V.RAMP
V.DRIVE
V.BLK
P/N
H.BLK
AFC F
AFC
H.DRIVE
+12V-1
MUTE POWER
A.B.L.
MAIN
P410
130Vp-p(H)
70V
270Vp-p(H)
27Vp-p(H)
230Vp-p(H)
150Vp-p(H)
25Vp-p(H)
200V
145V
58Vp-p(V)
29Vp-p(V)
18Vp-p(H)
0.8Vp-p(V)
200Vp-p(H)
150Vp-p(H)
20Vp-p(H)
1.2Vp-p(H)